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Health and mortality in Louisiana

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HEALTH AND MORTALITY IN LOUISIANA

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HEALTH AND MORTALITY IN LOUISIANA

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I SUMMARY

Diseases of the heart are far out ahead among all the causes of death in Louisiana. Each year they claim around 6,000 of the state's citizens, killing people at the rate of more than 250 per 100,000 population.

Pneumonia and influenza, nephritis, cancer, diseases of the nervous system, tuberculosis, accidents other than those in which motor vehicles are involved, causes associated with premature birth, syphilis, and motor vehicle accidents, in the order named, also are included among the ten leading causes of death in the state. Together these ten categories account for three fourths of all the deaths that occur annually.

Louisiana's farms enjoy a definite advantage over its towns and cities from the standpoint of health and longevity. This is true for both whites and Negroes and for practically all age groups. The rural people of the state are less likely to be decimated by contagious diseases, fall by the way because of degenerative ailments, or lose their lives by accident or through violence than their fellows in the towns and cities. However, malaria, typhoid fever, whooping cough, diphtheria and pellagra take a proportionately higher toll of life in rural than in urban areas.

Louisiana Negroes have much higher mortality rates than their white fellows. The racial differences are greatest in infancy, and have largely disappeared by the time age 65 has been reached. Syphilis, pellagra, typhoid fever, homicide, whooping cough, malaria, deaths associated with childbirth, tuberculosis, pneumonia and influenza and diarrhea all are included in the list of these in which the death rate of Negroes is more than twice that of whites. However, Negroes are much less likely to die in motor vehicle accidents or by self destruction than are the white people of Louisiana.

Louisiana compares unfavorably with the nation in the control of transmissible diseases. Among both whites and Negroes, rural and urban, the death rates from most of the important diseases of this type are above those for the nation. However, up until the present time the various causes of death that are associated with old age and

the degeneration of the body do not claim as many persons in Louisiana per 100,000 population as they do in the nation as a whole.

Health in the state is improving rapidly. In 1940 the mortality rates from pneumonia and influenza, tuberculosis, typhoid fever, malaria, diphtheria, and most other contagious diseases, were only fractions of what they were in 1920. Deaths associated with childbirth and homicides also are rapidly declining. Pellagra and other deficiency diseases are being reduced greatly. However, such ailments as heart disease, cancer, diabetes, and ulcers of the stomach are mounting fast among the causes of death. Motor vehicle accidents and suicide were also taking a much larger toll in 1940 than they were in 1920.

The saving in life achieved during the period 1920 to 1940 was much greater, relatively, among the Negro than among the white population of the state. For nearly all of the important causes of death the rates for the two races were much nearer one another at the close of the period than they were at the beginning.

Louisiana has hardly kept pace with the nation in the control of transmissible diseases, but the state has maintained its favorable position with respect to mortality from most of the degenerative causes of death.

II INTRODUCTION

A. Importance of Health Studies

Good health is one of the most fundamental goals of all efforts to improve human welfare. Agriculture and home economics, as well as the medical and sanitary sciences, are to be judged by the extent to which they contribute to a longer and more healthful life for the population.

In time of war the health status of the population assumes an increased importance. On the home front illnesses and accidents result in absenteeism in industrial plants which are producing vital war materials. Such lowered efficiency is likely to impair the whole war effort. Those responsible for the recruiting of military manpower are likewise concerned by the large numbers of draftees who must be rejected for physical impairments. The nation can ill afford to spare a considerable share of its young men from military service on the basis of ill-health, nor can any portion of the nation afford to fall down in contributing its quota to the sum total of those engaged in all phases of national defense.

In war or in peace more systematized factual knowledge concerning the health situation at a given time, and the direction in which we are moving, is an important practical portion of science. Its worth is especially great for the direction and guidance of activity programs

in education, sanitation, nutrition, and so forth which are designed to make for more healthy living and for longer life.

B. Objectives

Two sets of objectives were before us constantly in planning and executing this study. In the first place, we wanted accurate information concerning the principal causes of death, and the relative importance of each. We desired to know how these varied according to race, and especially how the rural population compared with the urban in resisting each of them. For all of the items included in the first set of objectives we wished to know how Louisiana compared with the nation.

The second set of objectives involved the time factor—we wanted to know the trends. First, of course, came the determination of the movement of each of the principal selected causes of death, along with changes in the death rate generally. But we also wanted to observe the changes with the data properly subdivided according to race. (Had it been possible we also would have liked to compare changes in rural and urban areas.) Finally, we especially desired to see the extent to which Louisiana has been keeping pace with, exceeding, or falling behind the nation as a whole in the control of mortality generally, and of each of the specific causes of death.

C. Data and Procedures

The index to health and mortality used in this study is the death rate. It is obtained by relating the number of deaths which occur in a given year to the population. Such an index may be used to represent the proportional parts of the total population, or of classes within the population, which are lost each year from all and from specific causes of death.

The basic element in the computation of the death rate is the number of deaths. Publications of the Division of Vital Statistics of the United States Bureau of the Census[1] contain information on numbers of deaths which occurred in the state for each year beginning with 1918, or since Louisiana began to register a sufficient proportion of her deaths to qualify for inclusion in the Registration Area of the United States. These deaths are classified by cause, according to a system known as the International List of Causes of Death. However, the List has been revised periodically to keep it abreast of new developments in the field of medical science, and the information for

[1]Those most useful are: *Mortality Statistics,* for the years 1920-1936, inclusive; *Vital Statistics of the United States,* for the years 1936-1940, inclusive; *Vital Statistics — Special Reports;* and a volume by Forrest E. Linder and Robert D. Grove entitled *Vital Statistics Rates in the United States,* 1900-1940. All of these are publications of the United States Bureau of the Census and are printed by the Government Printing Office, Washington, D. C.

most of the diseases is not comparable over the entire period. There have been three revisions since 1918, with the result that some of the titles have been dropped, others added, and still others shifted from one grouping to another. The numbers included under the various titles were shifted, and were made comparable to those used in the 1938, or most recent, revision of the List.[2]

The number of people in the population is the second item necessary for the calculation of the death rate. Since deaths are recorded on an annual basis it is desirable to relate them to the population at the midpoint of the period over which deaths are tabulated, and, if trends are to be reflected, it is necessary to estimate the population for the years between the enumerations made each decade by the United States Census. The method of simple arithmetic linear interpolation has been employed in estimating the population of Louisiana and its subdivisions.[3]

Using the population of Louisiana as of July 1, 1940, and the number of deaths from each cause as classified by the International List of Causes of Death, specific death rates per 100,000 of the state's population were computed. Of these, 25 causes were selected for further study. These include all the major causes, or those which levied tolls as high as 10 deaths against each 100,000 of the population of the state in 1940. Quite naturally, they include representations of three general classes of causes of death: (1) the degenerative diseases, or those associated with advancing age; (2) the transmissible, or contagious diseases; and (3) external causes of death. For all 25 categories the data for further analysis by race and residence in the state and nation are available in 1940, and can be made comparable on an annual basis since 1920, by race.

The numbers of deaths which occurred in Louisiana from the 25 causes are available by residence, and rates of mortality were computed separately for rural and for urban areas in the state in 1940.[4]

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[2]Since International List numbers as well as names of the diseases are available for the successive revisions, it was possible to work out a key list, which was used to arrive at annual numbers of deaths from most of the causes which are essentially comparable since 1920. Such a key list was later published in *Vital Statistics Rates in the United States,* 1900-1940, p. 105.

[3]This method was selected after a comparison was made of the results obtained by application of the arithmetic interpolation and the geometric, and the method used by the United States Bureau of the Census. When applied to the Louisiana population for the period 1920-1940, the estimates derived by simple linear interpolation more closely approached the estimates as published by the Census, but at the same time avoided certain extreme variations in the rate of annual population growth in the period — variations which cast some doubt on the accuracy of the latter method.

[4]The 1940 death data by residence are by far the most satisfactory for comparative purposes, because prior to that year the deaths were allocated by place of occurence of the death rather than by usual place of residence of the deceased, a practice which minimizes rural and exaggerates urban rates because of the concentration of hospitals and other medical

For this purpose the definitions of "rural" and "urban" adopted are those commonly employed by the United States Bureau of the Census; that is, all persons living in incorporated centers of population of 2500 and above are designated as "urban," the remainder of the state as "rural." The two types of areas were compared with respect to mortality rates from the 25 causes of death.

Numbers of deaths are also available by cause for the two major racial groups. Rates were computed for "whites" and for "all other races" on an annual basis from 1920 to 1940, and the racial groups were further subdivided by residence for the year 1940. The terms "Negro," "colored," and "nonwhite" are used synonomously, as Negroes constitute the bulk of all nonwhites in the state.

Rates of death were computed for racial and residential groups in the nation as a whole in 1940, for specific causes of death, and those which prevailed in Louisiana compared with those found to exist in the nation.

Annual rates of death were plotted by race for the 25 causes of death for the period 1920 to 1940 in Louisiana in order to determine the trends in rates of death from each of the causes.[5]

Trends which were found to exist in Louisiana were compared with those which took place in the nation as a whole over the same period by cause of death. The area chosen to represent the nation in this case is the Registration Area as of 1920, which includes 34 states and the District of Columbia. This was done in order to have a constant area in which trends could be reflected, for only in 1933 were all of the 48 states at last included in the Death Registration Area.

III WHAT KILLS LOUISIANIANS

A. Causes of Death

In 1940, 25,648 persons died in Louisiana. This is 10.8 per each 1000 of the population. The total includes deaths from various kinds of illnesses, those brought about by accidental or other violent means, and those for which the causes were unknown or ill-defined.

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facilities in the cities. Although the discussion is based primarily on differences found to exist in 1940, these differences are generally substantiated when mortality rates are compared biannually for the decade 1930-1940, or the period for which numbers of deaths are available for centers of population under 2500. Variations are wider, as would be expected, throughout the period over which deaths were registered by place of occurrence.

[5]We were not successful in our various attempts to make a comparison of trends by residence. Rates of death which were computed for rural and urban areas in the 1930-1939 period differed considerably from those after 1939, or when the basis of allocation was changed from occurrence to residence. More error was introduced by the factor for some of the causes than for others. Then, population estimates for inter-census years for rural and urban areas are inadequate for year-to-year comparison of trends. Finally, if comparisions are extended back beyond 1930, the definition of "urban" would have to be changed, because of the way in which deaths were tabulated, to include cities of 10,000 population and over, instead of 2500 or more.

In terms of the number of lives which they claim annually, some of the causes are vastly more important than others. The heaviest toll of all is exacted by heart disease, which stands far out in front of any of the rest in this respect and alone accounts for almost one fourth (23.6 per cent in 1940) of all deaths that occur in the state. It killed in 1940 no less than 6,066 persons, or about 256 of every 100,000 of the state's population. More than twice as many people died, in fact, from heart disease than from any other one cause.

Standing in second place as a killer of Louisiana's people is pneumonia and influenza which, combined, are responsible for 107 deaths per 100,000 of the population and account for about 10 per cent of the annual death toll. In third and fourth places on the list of diseases which prove fatal to the people of the state are nephritis and cancer, which are of about the same importance, killing 91.5 and 87.4 persons, respectively, per 100,000 of the population in 1940. These two diseases each account for an additional eight per cent of the total number of deaths. Only slightly less likely to be fatal are diseases of the nervous system,[6] to which were attributed 70.4 deaths for each 100,000 residents of the state.

Sixth in rank on the list of fatal diseases is the traditionally dreaded killer, tuberculosis. Almost 60 persons per 100,000 of the population succumb annually to this disease in Louisiana. About 45 Louisianians meet their deaths by accidents other than those in which motor vehicles are involved and about 37 because of premature birth. Nearly 30 per 100,000 die with syphilis as the primary cause. Motor vehicle accidents, a cause which has attracted much attention in recent years, was responsible for slightly less than 25 deaths for each 100,000 Louisianians in 1940 and stands in tenth place in relation to the other important causes of death. The foregoing constitute the ten principal diseases and conditions leading to loss of life in Louisiana, and these, together, account for approximately three fourths of the entire annual death toll.

In addition, there are other diseases of sufficient importance to merit the serious consideration of those concerned with health conditions in the state. Among these are diarrhea, diabetes, homicide, puerperal causes, and hernia, each responsible for between 200 and 400 deaths each year, or from 10 to 20 deaths per 100,000 persons. (See Table I.) Annually between six and ten people out of each 100,000 are dying from appendicitis, from cirrhosis of the liver, congenital malformations, suicide, whooping cough, and ulcer of the stomach.

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[6]The title "diseases of the nervous system" as used in this study refers only to intracranial lesions of vascular origin, which constitute the majority of diseases which affect the nervous system.

There are still other diseases which formerly were of considerable importance and which by 1940 were still killing from two to between three and four persons per 100,000 of the population. Examples of these are malaria, typhoid fever, pellagra, and diphtheria.

Observation of the relative importance of the various causes of death in Table I makes it evident that the degenerative diseases, which take such a heavy toll of persons in middle and late life, rank high. Diseases of the heart, cancer, and diseases of the nervous system occupy very prominent places; and these four, when combined with the respiratory ailments and with accidents account for about 80 per cent of all deaths. At the other end of the scale fall many of the infectious diseases—typhoid fever, whooping cough, diphtheria—from which loss of life is now relatively low in comparison with the total number of deaths. As will be indicated later, Louisiana has done much to control mortality from infectious diseases; but it is still confronted with the greater task of reducing fatalities from degenerative ailments, accidents, and violence.

TABLE I

Mortality Rates from the Common Causes of Death in Louisiana, 1940, and the Relative Rank of Each Cause*

Rank	Cause of Death	Rate per 100,000 Population
	All causes	1082.0
1	Diseases of the heart	256.0
2	Pneumonia and influenza	106.9
3	Nephritis	91.5
4	Cancer and other maligant tumors	87.4
5	Diseases of the nervous system	70.4
6	Tuberculosis	58.7
7	Accidents other than motor vehicle	44.7
8	Premature birth	36.9
9	Syphilis	29.1
10	Motor vehicle accidents	24.1
11	Diarrhea, enteritis, ulceration of the intestines	17.6
12	Diabetes mellitus	17.4
13	Homicide	12.0
14	Puerperal causes	11.5
15	Hernia, intestinal obstructions	10.1
16	Appendicitis	9.7
17	Cirrhosis of the liver	8.9
18	Congenital malformations	8.8
19	Suicide	8.5
20	Whooping cough	6.3
21	Ulcer of the stomach	6.1
22	Malaria	3.7
23	Typhoid and parathphoid fever	3.4
24	Pellagra (except alcoholic)	3.2
25	Diphtheria	2.1
	Ill-defined causes	12.4
	All other causes	147.0

*Based on population estimated as of July 1, 1940.

B. Residential Differences.

Louisiana's farms enjoy a definite advantage over its towns and cities from the standpoint of health and longevity. The annual death toll from all causes is only 8.7 per 1000 in the rural areas of the state in comparison with 13.7 in the urban districts. The differential is favorable to the rural population in the cases of both whites and Negroes, and it applies at all ages except those of early childhood and young adulthood when the rates are very near one another. (See Figure 1.) The country makes the best showing in comparison with the city in the health and consequent low death rates of infants and old people. Although the rural white people have much lower death rates than their urban fellows, the advantage is not so striking among the white people as it is among the nonwhite or Negro population.

Within the urban group the highest rates of all were characteristic of the smaller cities, or those ranging in population from 2500 to 10,000.

As would be expected on the basis of these death rates, Louisiana's rural people (those living in centers of less than 2500 population and the open country) demonstrate a greater resistance to most of the important causes of death than do residents of the towns and cities of the state. (See Table II.)

This is true without exception of the degenerative diseases. It is especially marked with respect to mortality among the white population, for whom differences between rural and urban areas are greater for diseases of this type than they are for nonwhites. Thus deaths from heart disease were twice as frequent relatively among urban whites as among rural whites in 1940, and the proportion of urban colored who succumbed to these diseases exceeded the proportion of rural colored by 60 per cent. The country enjoyed about the same advantage over the city in regard to deaths from nephritis, the racial differences also being of the same order. Cancer was about twice as likely to be fatal to urban as to rural residents, and the same is true of diabetes. Mortality rates from diseases of the nervous system were about 50 per cent higher for urban residents, and those from ulcer of the stomach one third higher. Appendicitis rates are about 80 per cent higher among urban residents of both races, and hernia and cirrhosis of the liver are likewise more important as causes of death in cities. Thus the country people, both white and Negro, enjoy a great advantage over urban Louisianians regarding susceptibility to degenerative ailments. This is all the more significant due to the fact that the country has more than its pro rata share of the state's old people, among whom the degenerative troubles are the principal causes of death.

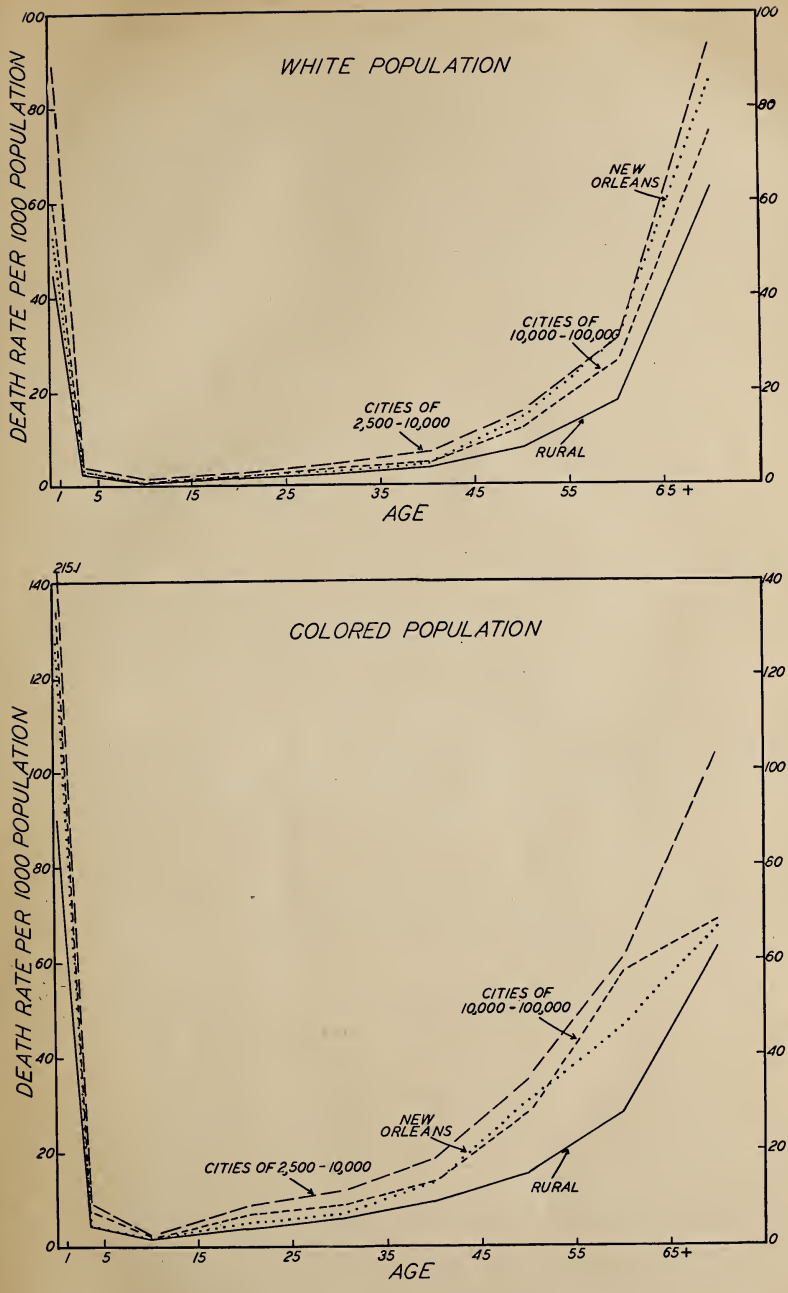

FIGURE 1. Death Rates From All Causes For Selected Residential Groups, Louisiana, 1940, by Age and Race.

The rural sections of the state also are better off than the urban in respect to deaths from many of the important transmissible diseases. Syphilis, one of the more common ones, is strikingly more likely to be fatal to urban residents. In fact, in relation to the population, urban whites are 3.4 times as likely to die of syphilis as are rural whites; and urban colored people are almost twice as likely to die of this dread diseases as their fellows in the rural districts. The diseases which primarily affect the respiratory tract take much heavier tolls from the populations of cities, and especially from the colored segments of city populations. According to the data, tuberculosis annually kills 41 out of each 100,000 rural residents and 77 of each 100,000 urban residents of Louisiana. In 1940 the rural and urban death rates of white people from this disease were 25.5 and 46.9, respectively, and those for colored people were 66.4 in the rural and 141.6 in the urban areas. Pneumonia and influenza, which are a little more likely to be fatal to urban whites than to rural, are characterized by rates about 60 per cent higher among colored people who live in towns and cities than among those who reside in the country.

Deaths from causes associated with premature birth seem to occur more commonly in urban areas especially among nonwhites, although a part of the difference is probably due to better registration in the cities.

More urban than rural residents die from violent or accidental causes. For example, the suicide rate is more than twice as high in the city as in the country, and this is true for both whites and Negroes. Homicide, particularly among colored people, is much more frequently a cause of death in urban areas. And accidents, both those in which motor vehicles are involved and those of other types, consistently kill somewhat higher proportions of the populations of cities than of the country people.

Residence seems to exert little influence on the frequency with which deaths occur due to puerperal causes, congenital malformations, and diarrhea.

But there are some causes of death for which the city makes a better showing than the country. Among colored people the death rates in 1940 from typhoid fever and whooping cough in rural areas exceeded somewhat those in urban areas. The same holds true for pellagra and diphtheria, and for both of them the differential applies to the white population also. Malaria, of all the important causes of death, however, constitutes the most clearcut exception to the rule of higher rates in urban Louisiana. As in the past, this disease continues to be a greater danger to health and life in the country than in the city.

TABLE II

Mortality Rates from the Common Causes of Death in Louisiana, 1940, by Residence and Race*

Cause of death	Rates per 100,000 population								
	Total			White			Colored		
	Rural	Urban	Ratio: Urban-Rural	Rural	Urban	Ratio: Urban-Rural	Rural	Urban	Ratio: Urban-Rural
Diseases of the heart	188.7	351.1	1.9	162.5	340.2	2.1	230.1	374.0	1.6
Pneumonia and influenza	96.3	121.6	1.3	76.3	81.7	1.1	127.9	205.7	1.6
Nephritis	70.3	120.7	1.7	51.5	99.0	1.9	99.8	166.4	1.7
Cancer	61.1	124.5	2.0	60.4	124.7	2.1	62.2	124.1	2.0
Diseases of the nervous system	58.4	87.1	1.5	46.4	71.5	1.5	77.3	120.0	1.5
Tuberculosis	41.4	77.3	1.9	25.5	46.9	1.8	66.4	141.6	2.1
Accidents other than motor vehicle	41.0	51.0	1.2	36.3	43.9	1.2	48.4	66.0	1.4
Premature birth	31.3	55.4	1.8	24.5	31.7	1.3	42.1	105.4	2.5
Syphilis	21.7	39.3	1.8	4.6	15.5	3.4	48.6	89.5	1.8
Motor vehicle accidents	19.6	29.1	1.5	22.6	31.7	1.4	14.9	23.5	1.6
Diarrhea, enteritis, etc.	13.0	13.6	1.0	7.4	7.8	1.0	21.8	25.7	1.2
Diabetes mellitus	12.1	25.1	2.1	12.2	28.1	2.3	12.1	18.7	1.5
Homicide	8.6	16.3	1.9	4.6	6.0	1.3	14.9	38.1	2.6
Puerperal causes	11.8	11.0	.9	7.0	7.2	1.0	19.5	19.0	1.0
Hernia	7.8	13.2	1.7	6.7	11.4	1.7	9.5	16.8	1.8
Appendicitis	7.3	13.3	1.8	7.3	13.4	1.8	7.3	13.0	1.8
Cirrhosis of the liver	5.1	14.3	2.8	5.8	15.3	2.6	3.9	12.1	3.1
Congenital malformations	7.9	9.8	1.2	8.1	10.7	1.3	7.6	7.9	1.0
Suicide	5.6	13.3	2.4	8.3	18.2	2.2	1.3	2.8	2.1
Whooping cough	7.9	4.2	.5	2.9	3.3	1.1	15.6	6.0	.4
Ulcer of the stomach	5.1	7.0	1.4	5.3	7.2	1.4	4.9	6.7	1.4
Malaria	5.1	1.7	.3	3.3	.9	.3	7.8	3.5	.4
Typhoid and paratyphoid fever	3.7	3.1	.8	1.6	1.8	1.1	6.9	5.7	.8
Pellagra	3.7	2.3	.6	1.1	1.0	.9	7.8	5.1	.6
Diphtheria	2.5	1.5	.6	2.0	1.6	.8	3.2	1.3	.4
All causes	874.7	1370.9	1.6	706.5	1171.2	1.7	1139.7	1792.8	1.5

*Based on population enumerated as of April 1, 1940.

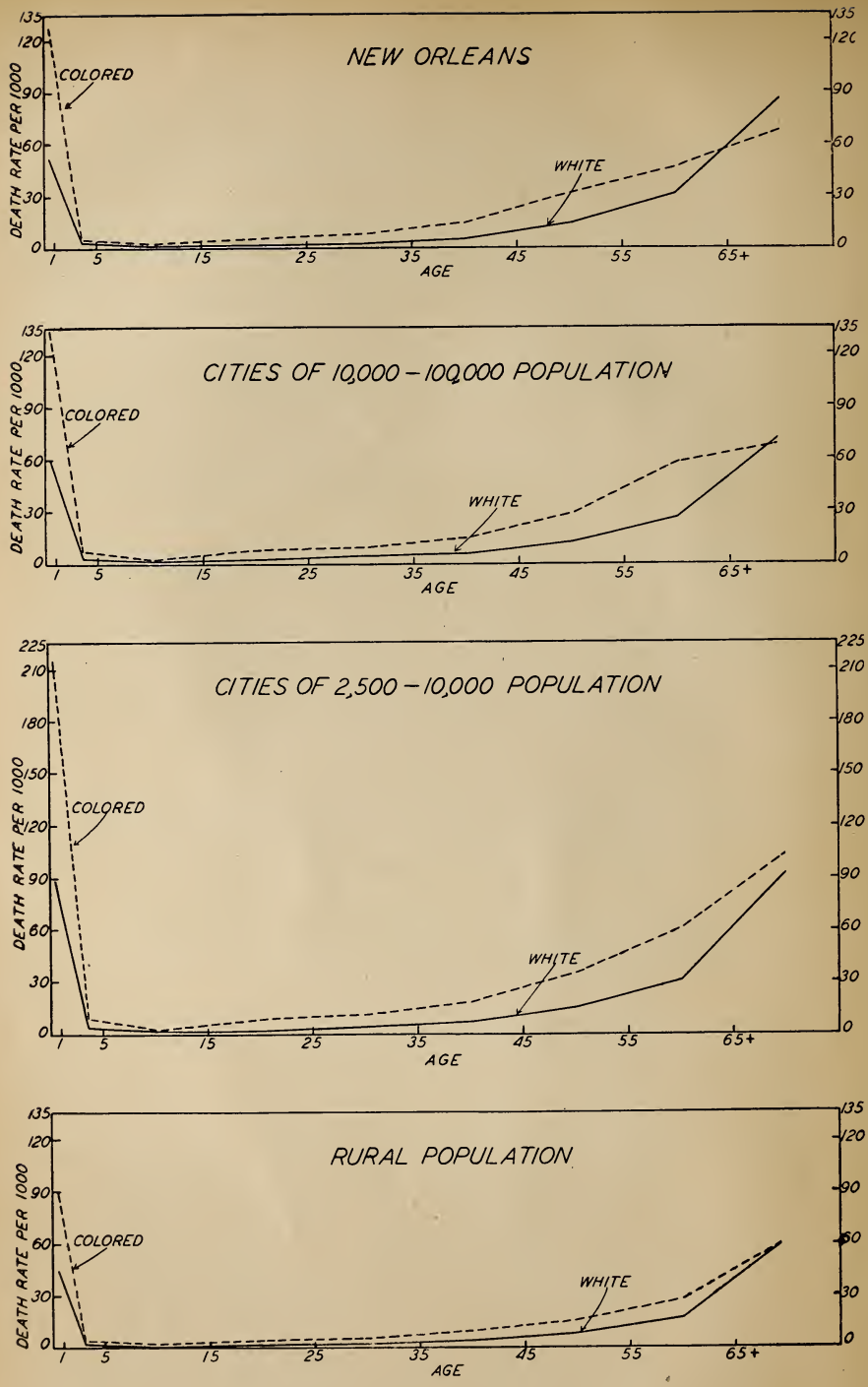

FIGURE 2. Death Rates From All Causes For White and Colored Populations, Louisiana, 1940 by Age and Residence.

C. Racial Differences.

The health of Louisiana's colored people, as gauged by mortality rates, is considerably worse than that of her white people. The number of deaths from all causes for this race is about 13.8 per 1000, or one and one-half times as high as that of whites (9.1 per 1000). The whites enjoy this superiority over nonwhites at all ages except 65 years and above; and the differences in favor of the whites persist in all types of residential areas—in rural districts, in small and large cities—a fact which further substantiates their significance. (See Figure 2.)

The most extreme differences between the two races occur with respect to deaths among infants, indicating that the whites utilize superior skills and resources in caring for and feeding young children. After lethal selection has been operative for some years, the superiority of the whites decreases, and after age 65 the colored people of the State may enjoy a longevity which compares favorably with that of their white fellows. The reported data indicate this to be true in the large cities of the state. In rural areas, however, rates of death for colored and white persons beyond the age of 65 years are very close to each other, and in the small towns and cities (2,500 to 10,000 population) aged as well as younger Negroes are characterized by higher rates of mortality than are the whites who live there. But caution should be used in reaching conclusions on this score. It should be remembered that the age data for Negroes are less reliable than those for whites; and that the Social Security Program introduced between 1930 and 1940 may have stimulated some persons to attain the age 65 more quickly than normal. At any rate there were reported in Louisiana only 8,999 Negro females aged 55-59 in 1930 in comparison with 10,341 aged 65-69 in 1940. Also the decrease of Negro males in the age group under consideration from 11,099 aged 55-59 in 1930 to 10,417 aged 65-69 in 1940 does not seem sufficiently large. Among white females the corresponding change was from 19,032 in 1930 to 17,108 in 1940, and among white males the decrease was from 19,980 at the beginning of the decade to 15,744 at the close. Thus the apparent slight advantage of the nonwhites aged 65 and over in reality probably is due to the reduction in rate achieved by inflating the population.

Interestingly enough, with the age factors properly evaluated, it is in the small towns and cities (2500 to 10,000) that the differential between whites and Negroes is most pronounced. It will be remembered that these small centers are the ones where health and longevity seem to be the poorest in the state. Probably selective migration from the farms, the tendency for aged and ailing persons from the open country to move into the near-by center, is the responsible factor. If so, the tendency seems to be more pronounced among Negroes than among whites.

Louisiana's white people consistently make a better showing than her colored people in resisting many of the specific causes of death. (See Table III.) Differences in rates of mortality of the two races from the transmissible diseases are especially pronounced. Pneumonia and influenza are killing twice as many Negroes as whites in proportion to their respective numbers in the state; tuberculosis is taking a toll of colored lives two and one-half times as high as that of whites; and syphilis actually seems to be six and one-half times as deadly to the Negroes as to white residents of the state. Extreme differences also characterize the rates of death for the two races with respect to typhoid fever and whooping cough, each proving almost four times as likely to be fatal to Negroes as to whites. Malaria kills almost three times as many colored people, proportionate to population, and diarrhea is about twice as likely to be fatal to colored as to white residents. The rate of death from diphtheria for the colored population in 1940 slightly exceeded that for whites, but this has not been consistently true over a period of time in the past. This indicates that measures for the control of acute and infectious diseases which have been fairly successfully applied to whites need to be extended in a more efficient manner to the Negro population. If for no other reason, self-defense urges this upon the white population of the state.

There are other causes of death which rank right along with those of a transmissible nature in being more likely to be deadly to the Negroes of the state. Pellagra, a deficiency disease associated with poverty and poor food habits is, like syphilis, six times as likely to be fatal to Negroes as to white people. In proportion to their numbers colored people succumb almost three times as frequently to puerperal causes and almost twice as frequently to causes associated with premature birth as do whites.

On a percentage basis whites less frequently are involved in fatal accidents other than those with motor vehicles than are Negroes. Homicide is the cause of many more deaths among Negroes than among whites per 1,000 of the population, the rate for the former being more than four times that for the latter.

With respect to deaths from some of the degenerative diseases, whites also maintain an edge over nonwhites. Although it is the primary cause of death for both races, the death rate from diseases of the heart proved about 20 per cent higher among colored people than whites in 1940. The percentages of Negroes who succumb to nephritis and to diseases of the nervous system exceeded by about two thirds those of the whites who die of these diseases. Hernia, too, seems to be a little more likely to be fatal to Negroes than to whites.

TABLE III

Mortality Rates from the Common Causes of Death in Louisiana, 1940, by Race and Residence

Cause of death	Rates per 100,000 population								
	Total*			Urban†			Rural†		
	White	Colored	Ratio: Colored-White	White	Colored	Ratio: Colored-White	White	Colored	Ratio: Colored-White
Diseases of the heart	239.7	284.6	1.2	340.2	374.0	1.1	162.5	230.1	1.4
Pneumonia and influenza	79.1	156.3	2.0	81.7	205.7	2.5	76.3	127.9	1.7
Nephritis	72.7	124.8	1.7	99.0	166.4	1.7	51.5	99.8	1.9
Cancer	88.7	85.1	1.0	124.7	124.1	1.0	60.4	62.2	1.0
Diseases of the nervous system	57.5	93.2	1.6	71.5	120.0	1.7	46.4	77.3	1.7
Tuberculosis	38.2	95.0	2.5	46.9	141.6	3.0	25.5	66.4	2.6
Accidents other than motor vehicle	40.8	51.5	1.3	43.9	66.0	1.5	36.3	48.4	1.3
Premature birth	27.6	53.6	1.9	31.7	105.4	3.3	24.5	42.1	1.7
Syphilis	9.8	63.6	6.5	15.5	89.5	5.8	4.6	48.6	10.6
Motor vehicle accidents	27.8	17.6	.6	31.7	23.5	.7	22.6	14.9	.7
Diarrhea, enteritis, etc.	12.9	25.9	2.0	7.8	25.7	3.3	7.4	21.8	2.9
Diabetes	19.1	14.4	.7	28.1	18.7	.7	12.2	12.1	1.0
Homicide	5.5	23.5	4.3	6.0	38.1	6.3	4.6	14.9	3.2
Puerperal causes	7.0	19.3	2.8	7.2	19.0	2.6	7.0	19.5	.8
Hernia	9.0	12.1	1.3	11.4	16.8	1.5	6.7	9.5	1.4
Appendicitis	9.9	9.2	.9	13.4	13.0	1.0	7.3	7.3	1.0
Cirrhosis of the liver	10.1	6.9	.7	15.3	12.1	.8	5.8	3.9	.7
Congenital malformations	9.4	7.7	.8	10.7	7.9	.7	8.1	7.6	.9
Suicide	12.3	1.8	.1	18.2	2.8	.1	8.3	1.3	.2
Whooping cough	3.1	12.1	3.9	3.3	6.0	1.8	2.9	15.6	5.4
Ulcer of the stomach	6.3	5.6	.9	7.2	6.7	.9	5.3	4.9	.9
Malaria	2.3	6.2	2.7	.9	3.5	3.9	3.3	7.8	2.4
Typhoid and paratyphoid fever	1.7	6.4	3.8	1.8	5.7	3.2	1.6	6.9	4.3
Pellagra	1.1	6.8	6.2	1.0	5.1	5.1	1.1	7.8	7.1
Diphtheria	1.9	2.5	1.3	1.6	1.3	.8	2.0	3.2	1.6
All causes	914.9	1378.8	1.5	1171.2	1792.8	1.5	706.5	1139.7	1.6

*Based on population estimated as of July 1, 1940.
†Based on population enumerated as of April 1, 1940.

In all, 17 of the 25 common causes of death strikes harder among the colored population of the state. Furthermore, all of these except diphtheria prove to be a greater menace to health and life of Negroes, whether they live in the towns and cities of the state, or in its country districts. Diphtheria, although it too proves more likely to be fatal to rural Negroes than to rural whites, seemed a little less so to colored than to white residents of cities in 1940.

Some of the causes of death kill about the same proportions of both races throughout the state. This is true of cancer, appendicitis, diabetes, and congenital malformations. The differences between white and colored death rates from ulcer of the stomach and from cirrhosis of the liver are likewise very small, although the latter seems very slightly more dangerous to white people.

There are two outstanding exceptions to the rule that larger proportions of Negroes than of whites succumb to each of the assignable causes of death. As is to be expected, motor vehicle accidents take a larger toll of whites in proportion to population than of Negroes; and relatively fewer colored persons are impelled to deliberate self-destruction. For every 100 white deaths proportionate to the population which are brought about by motor vehicle accidents there are only 63 colored deaths; and white people are seven times more prone to commit suicide than the Negroes. The wide differences between whites and colored persist in country as well as city populations, a fact which adds strong support to the validity of the findings.

D. Comparison wtih the Nation

Louisiana compares unfavorably with the nation in the control of transmissible diseases. In Louisiana both whites and Negroes, rural as well as urban, are more likely to be decimated by the contagious diseases than are their fellows in the United States as a whole. For example, in 1940 influenza and pneumonia killed more people in the state, relative to population, than in the nation, a differential true for the white and Negro, in both the rural and urban segments of the population. Most unfavorable of all is the showing of Negroes in the cities and towns of the state. (See Table IV.)

Similar is the situation in respect to most other transmissible causes of death. Higher rates of death from whooping cough, from typhoid fever, from diarrhea, and from diphtheria prevail in Louisiana than in the United States as a whole, the differential holding for whites and Negroes in rural as well as in urban areas. Tuberculosis, too, is more likely to be fatal to urban Louisianians than to city dwellers generally. As is the case with pneumonia and influenza, the colored residents of the state's cities make the poorest showing in this respect.

TABLE IV

Mortality Rates from the Common Causes of Death, Louisiana and the United States, 1940, by Race and Residence*

Cause of death	Rates per 100,000 population							
	Rural				Urban			
	White		Colored		White		Colored	
	La.	U.S.	La.	U.S.	La.	U.S.	La.	U.S.
Diseases of the heart	162.5	243.6	230.1	187.3	340.2	337.5	374.0	314.8
Pneumonia and influenza	76.3	70.0	127.9	117.6	81.7	59.5	205.7	133.8
Nephritis	51.5	74.1	99.8	109.2	99.0	78.5	166.4	141.6
Cancer	60.4	97.7	62.2	53.9	124.7	145.2	124.1	105.0
Diseases of the nervous system	46.4	88.0	77.3	97.4	71.5	89.0	120.0	127.2
Tuberculosis	25.5	34.0	66.4	93.7	46.9	38.5	141.6	116.5
Accidents other than motor vehicle	36.3	46.0	48.4	51.6	43.9	47.2	66.0	55.4
Premature birth	24.5	23.2	42.1	32.0	31.7	23.0	105.4	43.5
Syphilis	4.6	8.8	48.6	45.6	15.5	10.7	89.5	63.7
Motor vehicle accidents	22.6	26.4	14.9	12.1	31.7	26.6	23.5	26.5
Diarrhea, enteritis, etc.†	10.7	8.4	23.3	19.7	10.5	5.4	20.9	12.2
Diabetes	12.2	20.5	12.1	11.1	28.1	32.8	18.7	25.3
Homicide	4.6	3.3	14.9	231	6.0	3.1	38.1	44.4
Puerperal Causes	7.0	6.0	19.5	18.6	7.2	5.3	19.0	14.9
Hernia	6.7	7.6	9.5	8.2	11.4	9.6	16.8	14.0
Appendicitis	7.3	8.5	7.3	7.5	13.4	10.8	13.0	13.5
Cirrhosis of the liver	5.8	5.5	3.9	3.6	15.3	11.4	12.1	8.2
Congenital malformations	8.1	10.2	7.6	5.5	10.7	10.5	7.9	6.8
Suicide	8.3	13.3	1.3	3.0	18.2	17.1	2.8	6.4
Whooping cough	2.9	2.5	15.6	7.5	3.3	1.2	6.0	4.1
Ulcer of the stomach	5.3	5.2	4.9	4.0	7.2	8.0	6.7	9.0
Malaria	3.3	1.0	7.8	8.5	.9	.3	3.5	2.4
Typhoid and paratyphoid fever	1.6	1.2	6.9	3.9	1.8	.6	5.7	2.4
Pellagra	1.1	1.7	7.8	7.8	1.0	.6	5.1	4.7
Diphtheria	2.0	1.5	3.2	2.3	1.6	.7	1.3	1.2
All causes	706.5	949.6	1139.7	1218.6	1171.2	1109.4	1792.8	1561.0

*Based on populations enumerated as of April 1, 1940.
†Under two years only.

But, on the other hand, white and colored residents of the rural districts of the state were not as apt to succumb, proportionately, to the disease as were rural dwellers of the country as a whole in 1940. Death rates from syphilis in the state were higher than the national average for all groups except the rural whites. Malaria, too, proved more likely to be fatal in Louisiana than in the United States among all racial and residential groups except the rural Negroes, for whom the death rate in the state was close to that in the nation.

As would be expected on the basis of Louisiana's heavy loss of life among infants, causes associated with premature birth are responsible for a higher proportion of deaths in the state among all racial and residential groups than in the nation. However, this is largely due to the high proportion of Negroes in Louisiana. Congenital malformations are only slightly more likely to be fatal to colored Louisianians than to the colored in the nation as a whole, while among whites they seem a little less prevalent in the state than in the United States. Puerperal causes are responsible for higher proportions of deaths in all population groups in Louisiana than in those in the nation.

Fortunately the transmissible diseases and those associated with childbirth and infancy are the ones most susceptible to control. They are not nearly so baffling as the degenerative ailments. Therefore, with the perfection of health and sanitary services, a general rise in the educational level, and more widespread diffusion of sanitary, nutritional and nursing information, the state may be expected to reduce the mortality rate from most of these causes to a considerable degree. Particularly important is the improvement of the situation among Negroes, so that they will serve less as the carriers of disease germs, deadly killers which attack all people irrespective of race.

The chief deficiency ailment, pellagra, seems to afflict Louisianians slightly more than it does people generally in the United States. Fatalities from this cause are higher, proportionately, among the urban residents of the state, both white and colored, than in the nation; however, in rural areas, Louisiana's colored residents are about as likely to die from this cause as those in the nation, and her whites are somewhat less likely to have pellagra given as the cause of their deaths.

The citizen of Louisiana is slightly less likely to have his life snuffed out in a violent manner than the average person in the United States. This is chiefly because the suicide rate in Louisiana is so much lower than the national average, for accidents do not take an unusually low toll of life in Louisiana and homicide is much more prevalent in the state than in the nation. The low incidence of suicide, in turn, is due to the large proportion of Negroes in the state, for, as indicated above, very few Negroes take their own lives. However,

Louisiana Negroes, both urban and rural, are less likely to commit suicide than their fellows elsewhere in the nation; and Louisiana rural whites also are much less prone to take their own lives than are rural whites in the nation as a whole. The high frequency of homicide in the state, on the other hand, likewise can be partially explained in terms of relative importance of the Negro population, among whom homicide rates are generally high. However, the comparisons should be made with residential groups subdivided according to race, when it apears that Louisiana Negroes are less prone to homicidal tendencies than the average in the nation, while Louisiana's white people are more likely to die at the hand of another than is true generally in the United States.

Contrasted with its poor showing in comparison with the nation in the control of transmissible diseases is the state's record with respect to the degenerative ailments. Most of these, the more baffling problems from the health standpoint, which are responsible for such a large share of the total number of deaths which occur annually in Louisiana, account for an even higher proportion of the annual death toll in the nation. Thus in Louisiana heart disease kills about 256 persons annually per 100,000 of the population, but the comparable rate in the country as a whole is 292. In other words, proportionate to the population, for every 100 deaths in the nation from this disease in 1940 there were only 88 in Louisiana. Relative to population, diabetes claims 66 lives in the state for each 100 in the nation; ulcer of the stomach, 90; and cancer and diseases of the nervous system between 70 and 80. Nephritis, on the other hand, seems slightly more likely to be fatal to Louisianians, and appendicitis kills about the same proportions of the residents of the state and the nation.

Greater resistance to the degenerative diseases in the state is confined mostly to the white population; and it is the rural whites of the state who make the best showing of all in this respect. In 1940 white people in rural Louisiana enjoyed lower rates of mortality than did rural whites of the nation from all of these diseases associated with advancing age except ulcer of the stomach, for which rates in the state and nation were equal. Urban whites of the state, too, make a fairly good showing in comparison with the urban whites of the nation in resisting disesaes of this type. However, the death rates from heart disease among whites in the towns and cities of Louisiana were about equal to those in the nation, and nephritis and appendicitis were a little more prominent as causes of death among white people in urban Louisiana than in urban parts of the United States as a whole. But neither Loui-

siana nor the United States seems to enjoy much advantage over the other with respect to deaths from the degenerative diseases among the colored populations. Negroes in rural districts of Louisiana died somewhat less frequently, proportionately, than did the rural colored of the nation in 1940 from nephritis and diseases of the nervous system and to about the same extent from disabetes; but, on the other hand, diseases of the heart, cancer, and ulcer of the stomach were somewhat more likely to be fatal to Louisiana's rural colored people. Urban colored in Louisiana were characterized by higher rates of death in 1940 from heart disease, cancer, and nephritis; by lower rates from diseases of the nervous system, diabetes, and ulcer of the stomach. Appendicitis proved about as dangerous to colored people in the state as to those in the nation generally.

IV. HEALTH IS IMPROVING

That the health of Louisiana's population is improving, and rapidly, there can be no reasonable doubt. Less satisfactory are the conclusions with respect to trends in the state in comparison with those in the nation. The close associations between race and mortality and residence and mortality, demonstrated in preceding sections, indicate that both race and residence must be taken into account before additional analysis can be of much value. But the data for the past are not tabulated in a manner that makes it possible to make the necessary refinements in the analysis of trends. For example, it is probably absolutely impossible to trace the mortality from tuberculosis or diseases of the heart for rural (either in centers under 2,500 or under 10,000 population) whites or rural Negroes in the United States over the period from 1920 to 1940. Only in 1939 and 1940 did the Bureau of the Census begin tabulating deaths in detail by place of residence. The earlier tabulations were by place of occurrence. This distinction is all important in any analyses in which the residential factor, the difference between rural and urban areas, enters. Not only are we unable to compare the trends in city and country, but inability to adjust for the residential factor makes us less certain of the racial differences in the trends and in the comparative trends in Louisiana and the nation than we should like to be.

A. Control of the Common Causes of Death Since 1920

As late as 1920 pneumonia and influenza, and tuberculosis were the most deadly diseases in Louisiana. Typhoid fever and malaria still ranked among the first ten causes of death at that time, and

TABLE V

Mortality Rates from the Common Causes of Death in Louisiana, 1920 and 1940, by Race*

Cause of death	Rates per 100,000 population					
	Total		White		Colored	
	1940	1920	1940	1920	1940	1920
Diseases of the heart	256.6	119.6	240.5	103.4	285.2	144.8
Pneumonia and influenza	107.2	158.2	79.3	137.8	156.7	190.1
Nephritis	91.8	86.6	73.0	75.4	125.1	104.0
Cancer	87.7	49.0	89.0	52.3	85.3	43.8
Diseases of the nervous system	70.6	53.1	57.7	49.9	93.4	58.1
Tuberculosis	58.8	140.6	38.4	80.9	95.2	233.7
Accidents other than motor vehicle	44.8	59.6	40.9	53.7	51.6	68.9
Premature birth	37.1	27.1	27.7	27.6	53.7	26.3
Syphilis	29.2	24.4	9.8	14.1	63.7	40.4
Motor vehicle accidents	24.2	5.0	27.8	6.4	17.6	2.7
Diarrhea, enteritis, etc.	17.6	51.7	13.0	46.0	25.9	60.7
Diabetes	17.5	7.8	19.2	9.5	14.4	5.1
Homicide	12.0	14.0	5.5	6.9	23.6	25.1
Puerperal Causes	11.5	24.4	7.1	19.9	19.4	31.5
Hernia	10.1	10.0	9.0	8.7	12.1	12.1
Appendicitis	9.7	12.9	9.9	13.5	9.3	12.0
Cirrhosis of the liver	9.0	8.8	10.1	9.1	6.9	8.3
Congenital malformations	8.8	12.6	9.5	11.8	7.7	13.8
Suicide	8.5	4.7	12.4	7.2	1.8	.8
Whooping cough	6.3	10.1	3.1	8.4	12.1	12.8
Ulcer of the stomach	6.1	3.7	6.4	3.6	5.6	4.0
Malaria	3.7	32.3	2.3	28.4	6.2	38.4
Typhoid and paratyphoid fever	3.4	15.4	1.7	11.7	6.5	21.3
Pellagra	3.2	11.2	1.1	4.3	6.8	22.0
Diphtheria	2.1	6.1	1.9	6.7	2.5	5.2
All causes	1085.0	1188.5	917.8	977.9	1381.6	1517.0

*Rates published in *Vital Statistics Rates in the United States,* 1900-1940.

diphtheria was responsible for many times the number of lives it now takes. During the 20 years, to 1940, the people of Louisiana made noteworthy progress in bringing these and other transmissible diseases under control.

Since 1920 the annual number of victims to pneumonia and influenza has been substantially reduced, although the rates still fluctuate greatly from year to year. In 1940 the rate was 50 per 100,000 below that in 1920. (See Table V and Figure 4.) This has meant a great saving in lives. The new types of chemotherapy which are now being successfuly used in the treatment of these diseases will undoubtedly serve to lessen the severity of future epidemics and diminish the rates still further in the future. However, the general level of deaths still remains high, as evidenced by the fact that pneumonia and influenza ranked second in numerical importance among all causes of death in the state in 1940. Efforts to control them should be strengthened, not relaxed.

Progress made in the state in reducing the fatality of tuberculosis has been little short of spectacular. The death toll from the disease has been cut by more than one half over the past two decades, and on an annual basis it now kills only about 59 persons out of each 100,000 in the state as compared with 141 in 1920. To save the 82 lives per 100,000 population, lives that would have been lost under the conditions prevailing in 1920, in an outstanding accomplishment in preventing wastage of human resources.

Great strides also have been made in bringing under control deaths from diarrhea and enteritis. These diseases occupied a much higher position among the causes of death in 1920, when they killed about 52 persons per 100,000, than in 1940 when the rate was 18 per 100,000, or only about one third of the former figure.

Typhoid fever is less than one fourth as important at the present time as it was when Louisiana entered the Registration Area, and mortality from malaria only about one eighth of what it was in 1920. Annually about 12 fewer persons in each 100,000 in the state are dying from typhoid than was the case two decades ago, and almost 30 less from malaria. Rates of death from diphtheria and from whooping cough have shown substantial improvement. In fact, for many of the common transmissible diseases, including tuberculosis, typhoid fever, diphtheria, and malaria, the 1940 rates of death were the lowest ever recorded. On the other hand, the mortality rate from syphilis is the only one which failed to show marked improvement.

The state has likewise been fairly successful in reducing the death toll from conditions associated with maternity and has curbed homicide to some extent. New minimal rates were also established for

these two causes in 1940. The annual death toll from pellagra, a disease closely related to adequacy of diet, is now, like those of the some of the infectious diseases, only a fraction of what it was in 1920. For this disease, too, a new low mark was reached in 1940. The death rate from accidents other than those in which motor vehicles were involved has been materially reduced, by about 15 deaths per 100,000 of the population, but accidents are still responsible for a sufficiently large number of deaths to make them rank among the ten leading causes of death. Notable advances have been made in reducing the death toll from appendicitis, and the rate from this cause in 1940 is lower than that for any previous year.

With respect to the control of other causes of death the state has not been so successful, and some of them have increased materially in importance since 1920. This has been especially true of the degenerative ailments, which remain the great unsolved health problems as increasing proportions of people reach the advanced ages. Deaths from heart disease have mounted steadily until by 1940 the loss of life was twice as great as it was in 1920. Two decades ago about 120 persons in the state out of each 100,000 died of heart disease; the rate in 1940 was 257, the highest on record. Cancer is likewise claiming a higher toll of lives today, the rate of 49 deaths per 100,000 in 1920 having increased to about 88 in 1940, or an increase of 39 deaths per 100,000 of the population. Diseases of the nervous system kill somewhat more persons at the present time (about 17 per 100,000 more) than they did 20 years ago, and the fatality of diabetes and ulcer of the stomach have both increased substantially. The 1940 rate of 17.4 deaths from diabetes per 100,000 of the population was the highest ever recorded for the disease. Although nephrtis has not increased in importance to the same extent as have other diseases of a degenerative nature, its annual death toll has not been significantly reduced. About the same proportion of persons (91.8 per 100,000) are dying of the disease today as in 1920 (86.6). To a limited extent these increases in the death toll attributed to degenerative ailments are a reflection of better diagnosis, and the reduction in the proportion of deaths classified as due to ill-defined or unknown causes. Nevertheless, there can be no doubt that the degenerative ailments have increased sharply, and that they probably will continue to gain in importance.

Motor vehicle accidents, particularly, and suicide to a lesser extent are also proving more important as causes of death than they were two decades ago. The death rate of 24.1 for motor vehicle accidents in 1940 was higher than that of any other year except 1936, when there slightly more, or 25.7 fatalities per 100,000 of the population from this

cause. .It was between four and five times as great as the rate of 5.3 which prevailed 20 years ago. The variation in suicide rates is not nearly so wide, although the 1940 rate of 8.5 is somewhat above the median annual rate for the 20-year period over which comparisons were made.

B. Trends by Race.

In absolute gains in lives saved over the past two decades, Louisiana's colored people seem to have shared to a somewhat greater extent than have her whites, proportionate to their numbers in the population. This is due primarily to the great strides which have been made in controlling certain of the transmissible diseases among Negroes. The most outstanding example of this is in the case of tuberculosis. Colored people were dying in 1920 at the rate of about 234 per 100,000 from tuberculosis, while in 1940 the rate had been cut to 95, or by 138 deaths per 100,000 of the population. The whites, for whom the rate was much lower at the beginning of the period, or 80.9, reduced theirs to the rather favorable figure of 38.4, or by 42.5 deaths per 100,000 of the population. (See Table V.) Larger absolute reductions were characteristic of Negro than of white death rates for malarial and typhoid fevers and for diarrhea, with the result that the rates of mortality for all these causes for the two races approximated each other more closely in 1940 than in 1920. In addition, Negroes of the state registered a much larger absolute reduction in deaths from pellagra than did whites, and they seem to have improved their situation a little more with respect to fatal accidents other than those involving motor vehicles. And accidents with motor vehicles which were, in 1940, killing about 20 more whites of each 100,000 than they were in 1920, had increased by only about 15 per 100,000 among colored.

On the other hand, with respect to gains made in the control of other of the causes of death, advances made by whites over the 20-year period were more outstanding than those made by Negroes. The fatality of pneumonia and influenza seems to be yielding somewhat more rapidly among the former, and the measures adopted by whites in curbing deaths from diphtheria and whooping cough are apparently proving a little more effective. Whites have also registered a little success in the control of deaths from syphilis, a cause which seems to have increased in importance in the Negro population. Rather substantial improvement (amounting to a reduction of 12 deaths per 100,000 population) in conditions associated with maternity has been characteristic of both races.

The degenerative diseases as a whole seem to have advanced a little more rapidly in importance as causes of death among colored

people. Diseases of the heart are killing about 137 more white persons today out of each 100,000 than they were in 1920; they are responsible for 141 more colored deaths per 100,000 population than they were two decades ago. On an annual basis per 100,000 population, cancer is now killing 37 more whites, and 41 more Negroes, respectively; and deaths from disease of the nervous system, which have increased only by about 8 per 100,000 among whites, have increased by 25 among nonwhites. Deaths from nephritis, which show a slight tendency to decline among whites since 1920, have increased by about 20 per 100,000 among nonwhites. These differences may be accounted for in part by more accurate assignment of deaths by cause at the present time among the state's Negroes,[7] and in part by the fact that as mortality from the transmissible diseases is reduced among them, a larger share of this race lives to reach the advanced ages.

C. Comparative Trends in Louisiana and the United States.

In final analysis the improvement in the health of Louisiana's population is to be judged in relation to comparable changes in the nation. This section analyzes the extent to which the state has kept pace with the nation in the control of the more important causes of death.[8]

A careful study of the evidence demonstrates that during the last 20 years Louisiana has not kept pace with the nation in the control of transmissible diseases. Neither among the white population nor the colored population do the trends compare favorably with those for the same groups in the United States. Consider some of the evidence.

Tuberculosis. Tuberculosis is one of the infectious diseases in Louisiana's record compares most favorably with that of the nation. For the total population the rate of fatalities from this scourge was consistently higher in the state than in the nation over the period 1920-1940. (See Figure 3.) However, the fact of the higher rates in the state is due entirely to the presence of the large Negro population, for the death rate from tuberculosis among Louisiana Negroes is consistently below that for the Negroes of the nation, and Louisiana whites, too, generally have been decimated less rapidly by tuber-

[7]In 1920 the death rate among colored for "senility" was 45.0 per 100,000; in 1940, it was 15.0. For whites in 1920 it was 16.6; in 1940, 7.2. For "ill-defined causes" the rates for colored were: 1920, 63.1; 1940, 23.1 for whites, 1920, 16.4; 1940, 6.4.

[8]For these purposes the nation is defined as the death registration area as it was constituted in 1920, when the following 35 states were included: California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Utah, Vermont, Virginia, Washington and Wisconsin.

culosis than those in the United States as a whole. This illustrates a point that should be uppermost in all of the comparisons, namely, that judgments should be based on the extent to which the reduction in the mortality among Louisiana's white people keeps pace with that among white people elsewhere, and that among Louisiana's Negroes is in line with that of Negroes in other parts of the nation. With respect to Negroes, the trends are clear and encouraging. Louisiana Negroes fell prey to tuberculosis less frequently than their fellows elsewhere in 1920. During the period of rapid improvement to 1940, measures taken in the state were even more effective than those applied generally. Louisiana Negroes now enjoy an even greater margin of safety over those of the United States than they had in 1920. But among the white population the trends are not so flattering to the state's pride. In 1920 Louisiana's advantage over the remainder of the nation was pronounced. Since that time improvements have been made, but in other parts of the nation the control of mortality from tuberculosis has proved more effective. By 1940 the white people of Louisiana were falling prey to tuberculosis at a higher rate than those in the other parts of the nation.

Pneumonia and Influenza. Mortality from these causes is very erratic. (See Figure 4.) As in the case of tuberculosis, white Louisianians have lost the superiority they once possessed over their fellows elsewhere. The same is probably true for the Negro population.

Typhoid and Paratyphoid. With respect to typhoid and paratyphoid, the state continues to make a pitiful showing. (See Figure 5.) Among both whites and Negroes, deaths from these unnecessary causes were much higher than those in the nation in the early 1920's. The improvements made by 1940, while substantial, still were not sufficient. Louisiana still occupies an unenviable position in the control of these diseases.

Diarrhea and Enteritis. On the whole the control of diarrhea and enteritis in Louisiana did not keep pace with that in the nation, and both whites and Negroes in the state compared more unfavorably with their fellows elsewhere in 1940 than they did in 1920. (See Figure 6.)

Malaria. Malaria has been of little importance, especially among whites, in the United States for many years. In Louisiana, however, it continues to take a considerable toll of life. (See Figure 7.)

Diphtheria. The white people of Louisiana, along with the Negroes, have now lost the superiority they once enjoyed over their fellows in other parts of the nation in the control of diphtheria. (See Figure 8.)

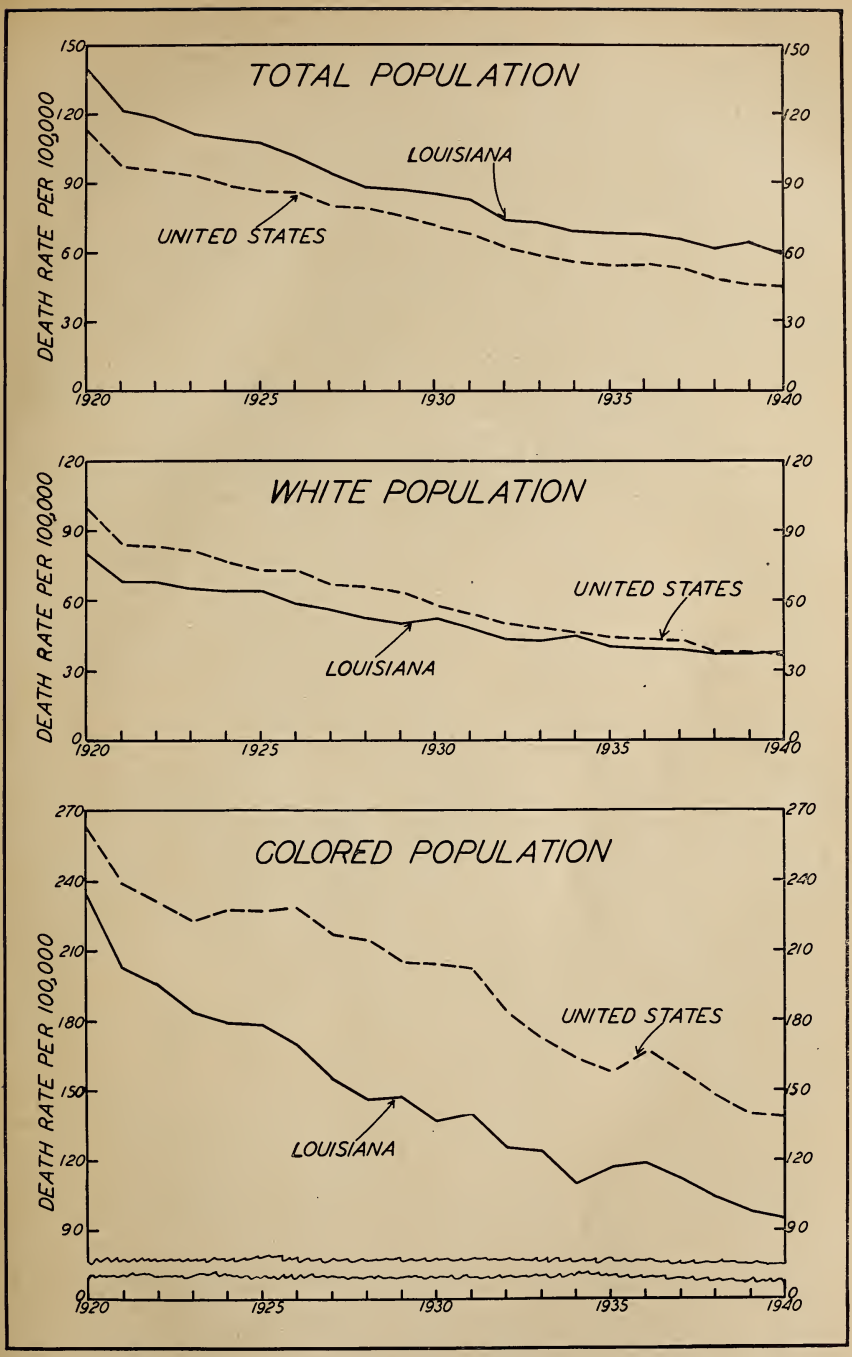

FIGURE 3. Annual Death Rates from Tuberculosis, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

Syphilis. Deaths attributed to syphilis continue to occur at about the same rate among the white populations of Louisiana and the nation. For Negroes the national rate seems to have overtaken that prevailing in the state. (See Figure 9.)

Whooping Cough. The death rates from whooping cough in Louisiana have not fallen with a speed comparable to that attained elsewhere. (See Figure 10.)

Allied to the transmissible diseases in that they are more readily controlled are the deficiency ailments. Pellagra is the chief one of these for which data are available. The state has now about overtaken the nation in the gradual elimination of this cause of death among white people, and it does not lag greatly in its control among Negroes. (See Figure 11.)

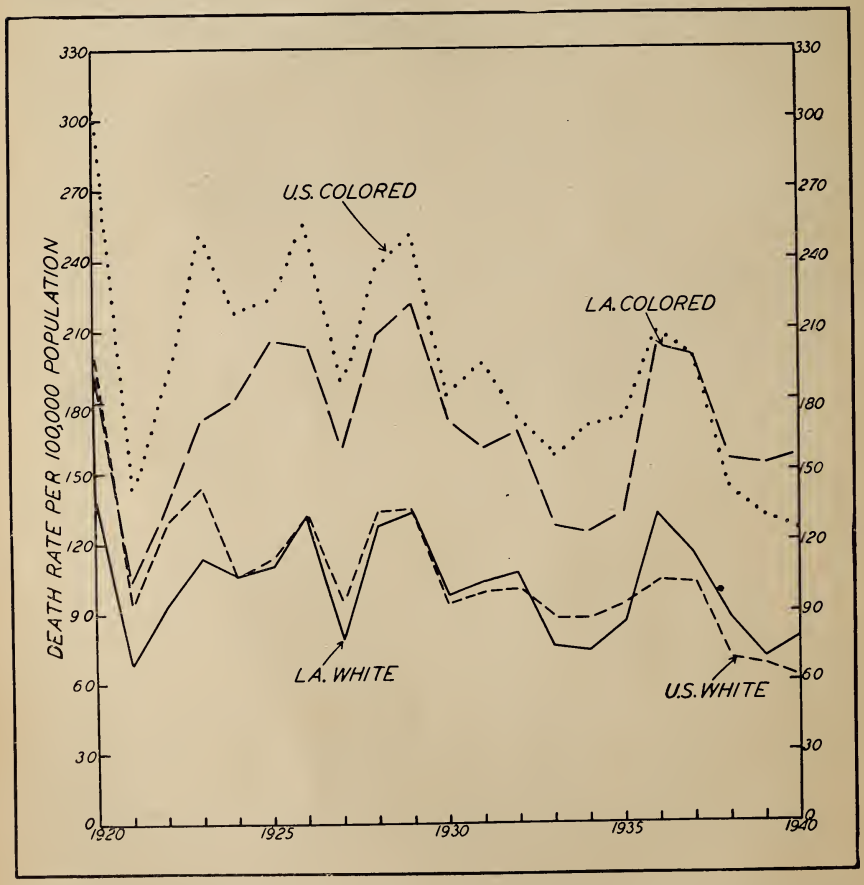

FIGURE 4. Annual Death Rates From Pneumonia and Influenza, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

Deaths associated with the bearing of children form another category that lends itself to control. Indicative of the lack of medical care is the fact that deaths from puerperal causes are not being eliminated as fully in Louisiana as elsewhere in the nation. (See Figure 12.) The state can hardly expect to come up to standard in this respect until the number and distribution of physicians are more adequate. As late as 1941, midwives attended 9.0 per cent of white and 55.3 per cent of the Negro live births, while in the nation as a whole the corresponding percentages were only 2.7 and 48.5.[9]

Fatalities attributed to premature birth are on the decrease in the nation. (See Figure 13.) The decrease among Louisiana white people is not so certain, and the Louisiana Negro population is characterized by a rising rate of mortality from this cause.

Most of the degenerative ailments, the causes of death which have pushed so rapidly to the fore in recent years, continue to take a rela-

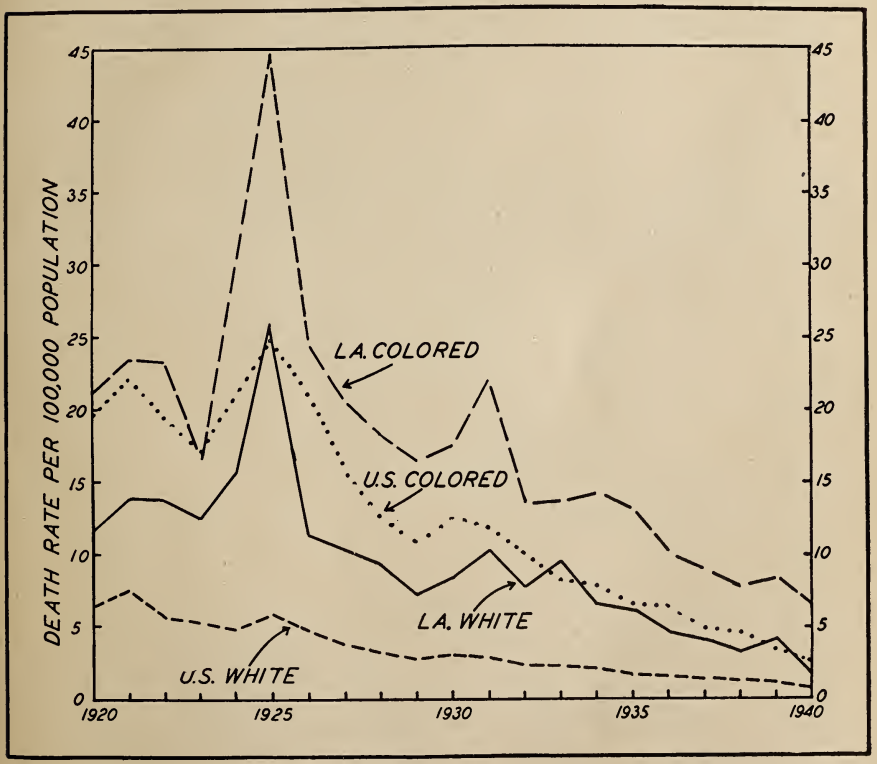

FIGURE 5. Annual Death Rates From Typhoid and Paratyphoid, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

[9]Bureau of the Census, "Live Births by Person in Attendance: United States, 1941", *Vital Statistics — Special Reports*, Vol. 17, No. 4 (Dec. 10, 1942), pp 20-21.

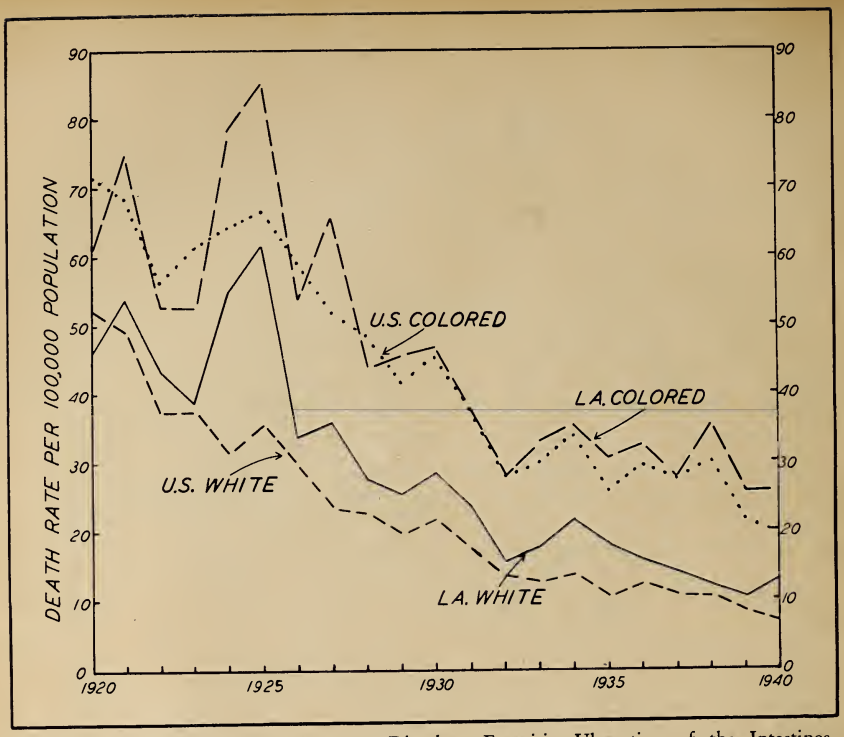

FIGURE. 6. Annual Death Rates From Diarrhea, Enteritis, Ulceration of the Intestines, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

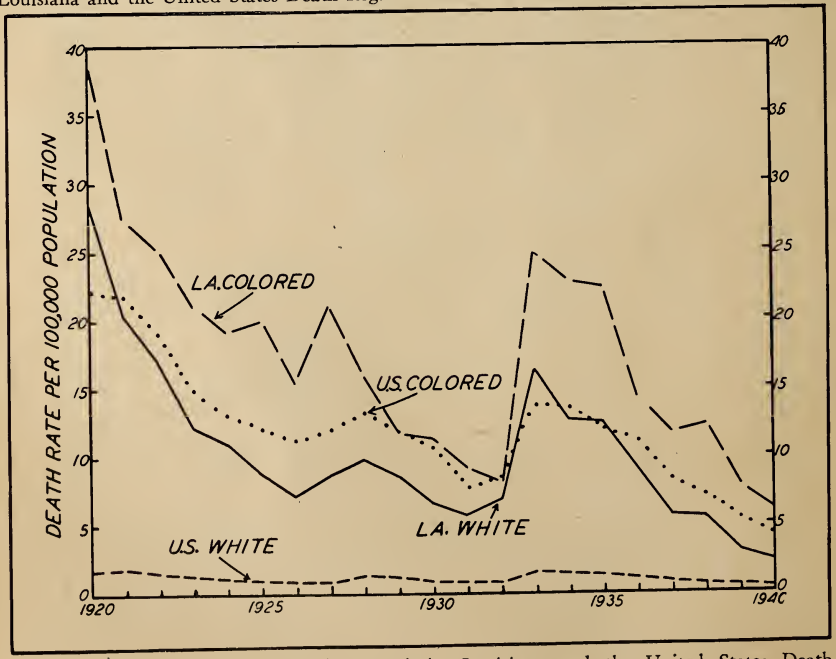

FIGURE 7. Annual Death Rates from Malaria, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

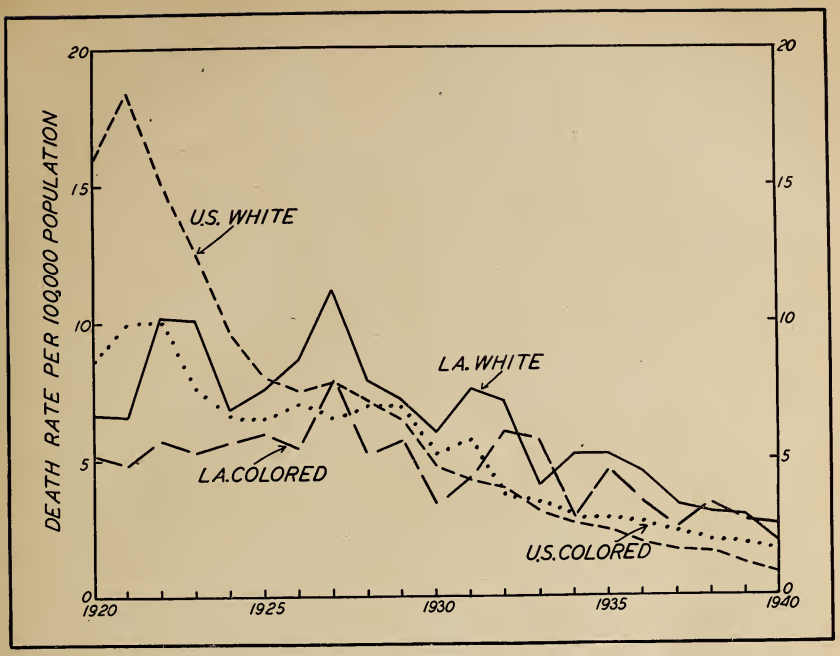

FIGURE 8. Annual Death Rates from Diphtheria, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

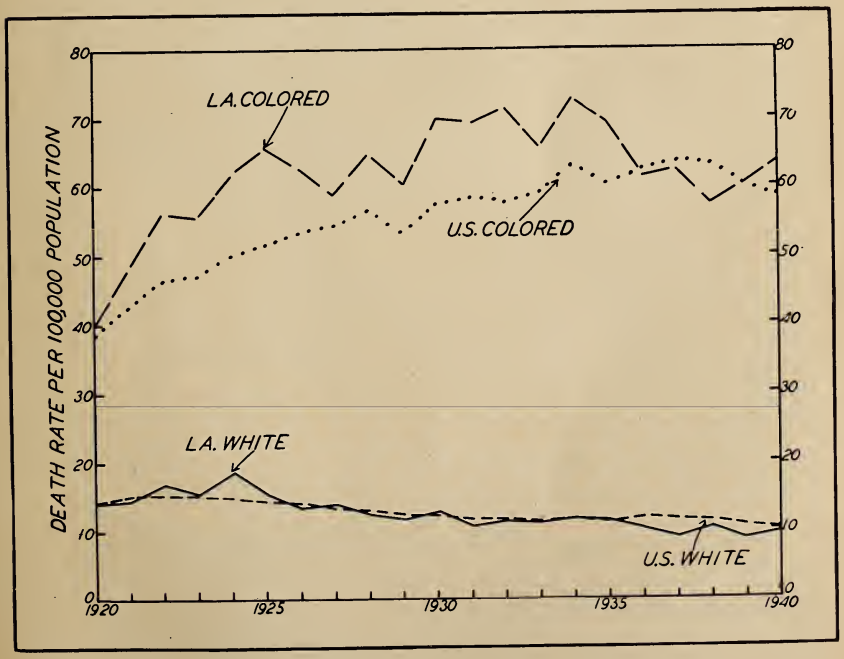

FIGURE 9. Annual Death Rates from Syphilis, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

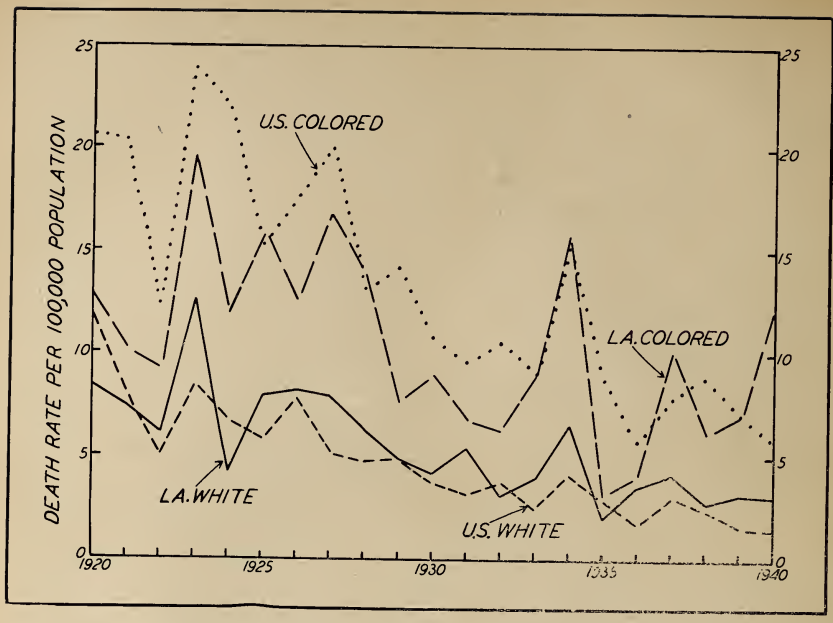

FIGURE 10. Annual Death Rates from Whooping Cough, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

FIGURE 11. Annual Death Rates from Pellagra, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

tively smaller toll of life in Louisiana than in the nation. To a considerable degree this offsets the state's disadvantageous position in the control of the communicable diseases. Consider the comparative trends.

In 1940 heart diseases alone took the lives of twice as many persons out of every 100,000 white people as they did in 1920, but the increase in Louisiana hardly kept pace with that in the nation. (See Figure 14.) Among Negroes, however, the state compares somewhat unfavorably with the United States.

The death rate from cancer in Louisiana is mounting, but not so rapidly among white people as is the case elsewhere. (See Figure 15.) On the other hand, the rates for Louisiana Negroes have not diverged significantly from those prevailing in the nation.

Contrary to popular supposition, there has been no great rise in the fatalities due to diseases of the nervous system. (See Figure 16.) The rates in Louisiana are far below those for the United States, but the relative positions changed little between 1920 and 1940.

Nephritis takes a considerable toll of life, but it is not on the increase. (See Figure 17.) Louisiana rates are about the same as those prevailing in the United States generally.

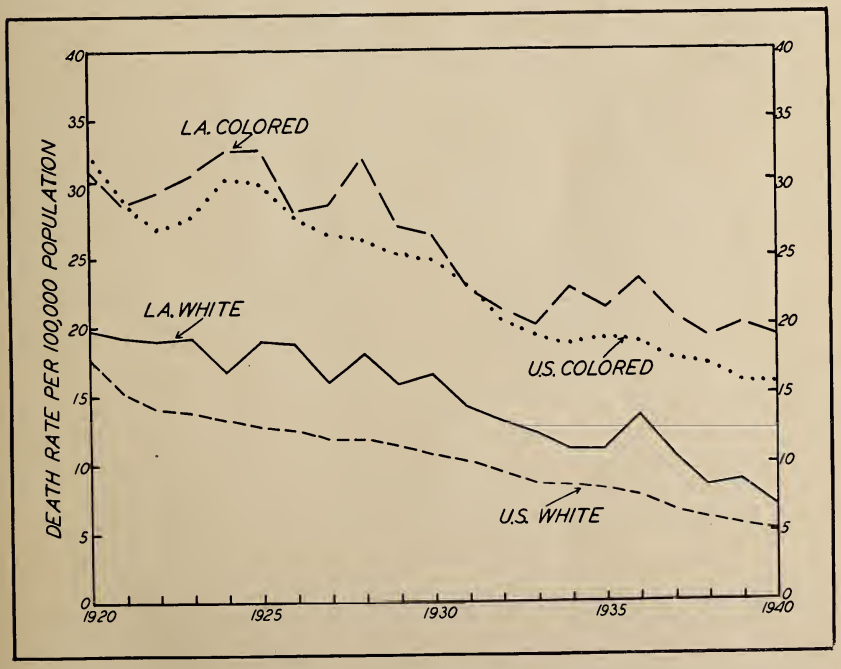

FIGURE 12. Annual Death Rates from Puerperal Causes, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

Ulcers of the stomach are increasing somewhat as a reported cause of death, but the rates in Louisiana continue to be somewhat below those in the nation. (See Figure 18.)

Diabetes is increasing rapidly as a reported cause of death in Louisiana as in the United States. (See Figure 19.) However, the rates in the state are mounting a little less rapidly than those in the nation. As a result Louisiana's advantage, already considerable in 1920, became more marked in the following 20 years.

The falling mortality rates from appendicitis will surprise most laymen. (See Figure 20.) The rates for Louisiana are slightly more erratic than those for the United States, but their magnitudes and trends are closely similar.

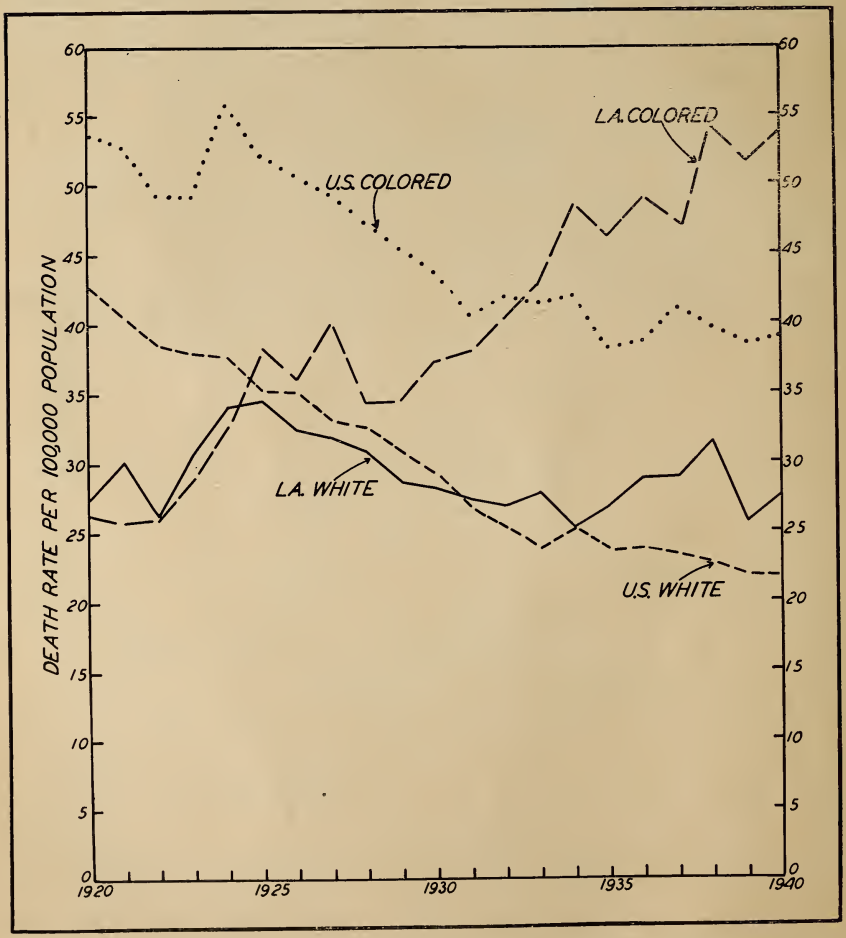

FIGURE 13. Annual Death Rates from Causes Associated with Premature Birth, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

Cirrhosis of the liver, hernia and intestinal obstructions take about the same tolls as in 1920. They are not particularly important, and Louisiana does not diverge significantly from the nation in mortality from these causes.

Congenital malformations are decreasing in importance as a reported cause of death. (See Figure 21.) The rates for Louisiana whites compare favorably, those for Louisiana Negroes unfavorably, with those for the United States.

Finally, there remain for consideration the trends in mortality from violence, accidents, and other external causes. Motor vehicle accidents, of course, increased spectacularly between 1920 and 1940. (See Figure22.) The rates in Louisiana lagged somewhat behind those of the nation; but among white people the differential has been elim-

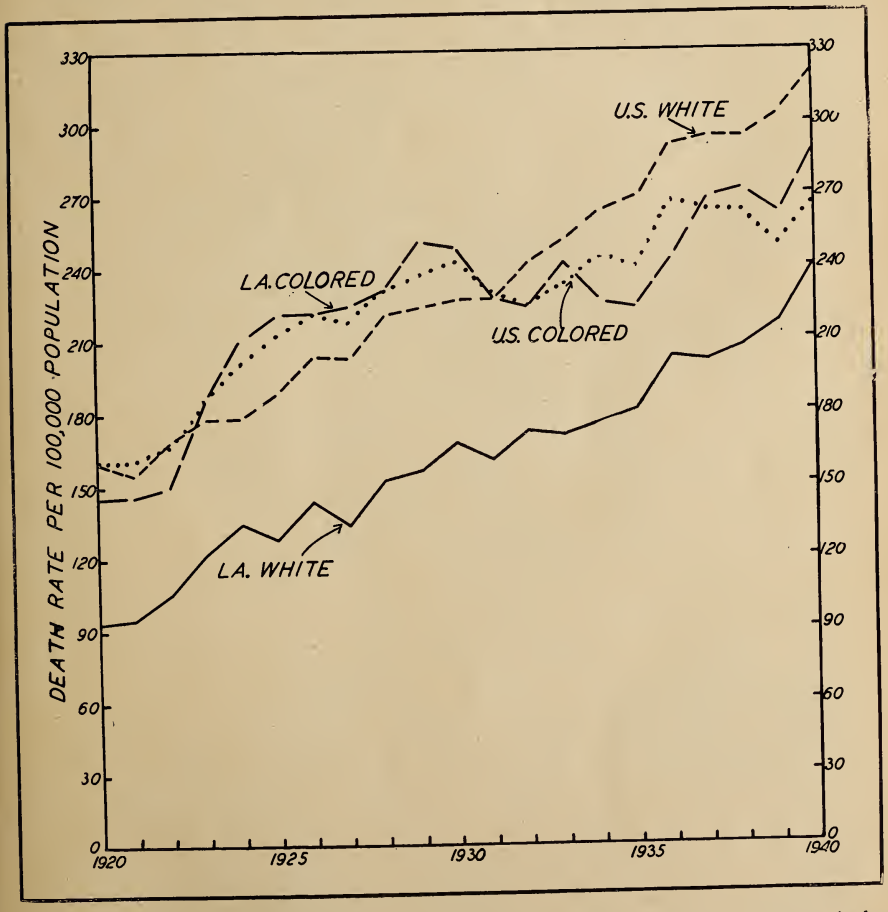

FIGURE 14. Annual Death Rates from Diseases of the Heart, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

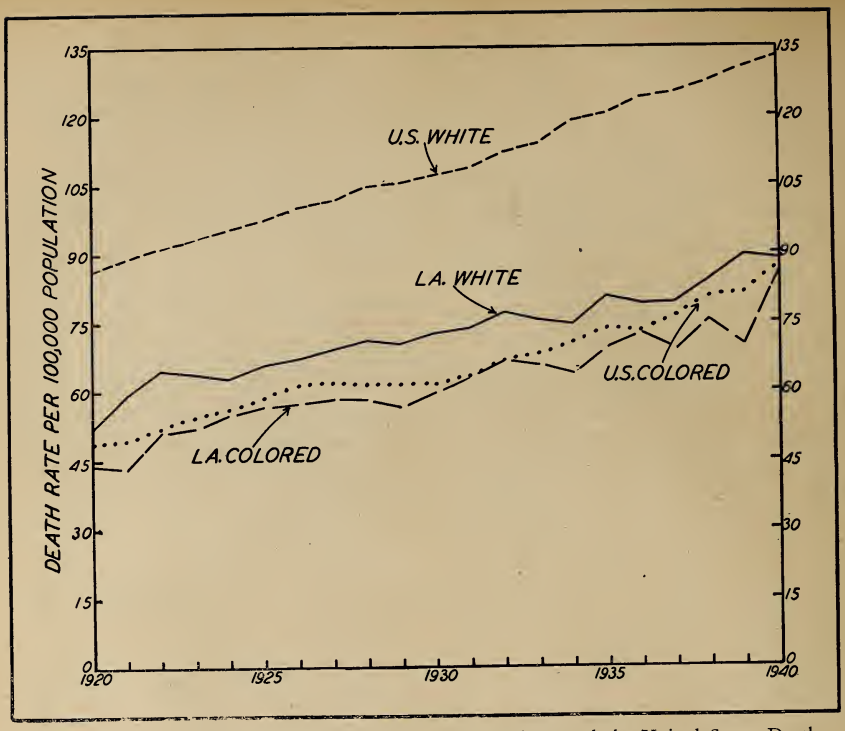

FIGURE 15. Annual Death Rates from Cancer, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

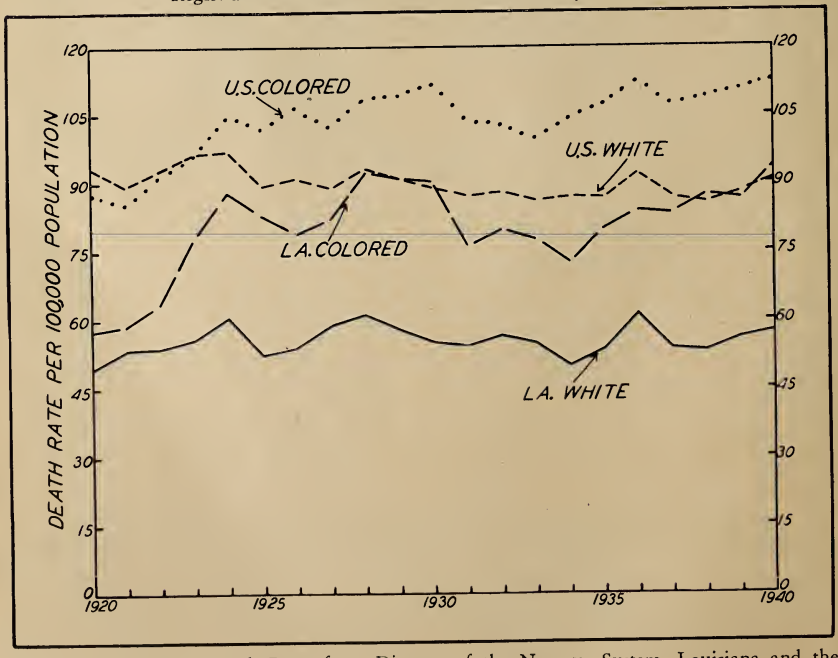

FIGURE 16. Annual Death Rates from Diseases of the Nervous System, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

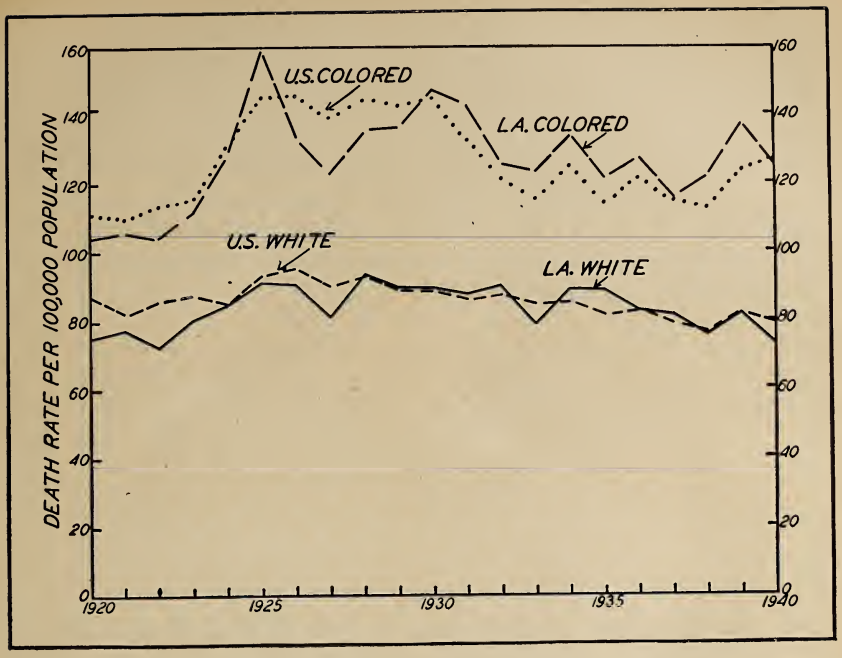

FIGURE 17. Annual Death Rates from Nephritis, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

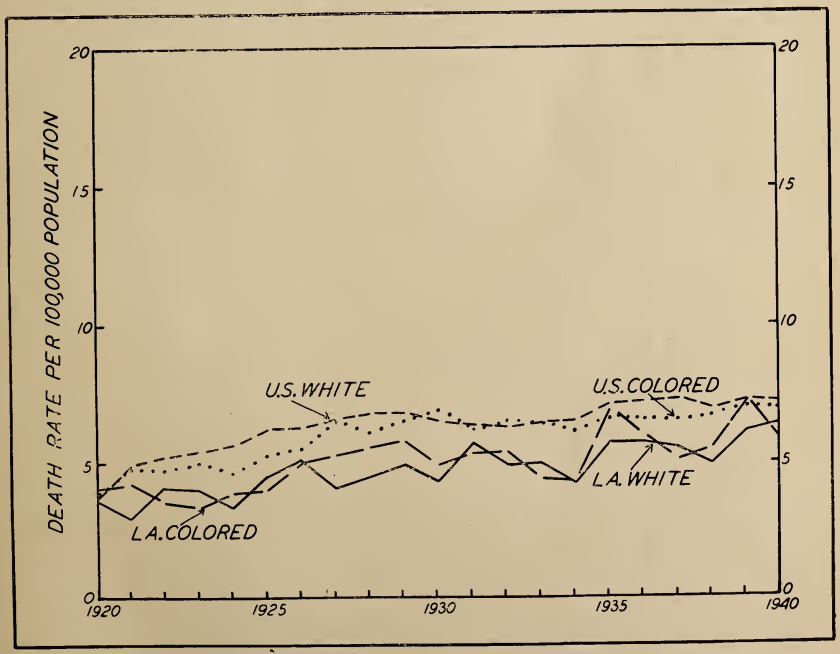

FIGURE 18. Annual Death Rates from Ulcer of the Stomach, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

inated by 1940. From other accidents, mortality has been slowly decreasing, perhaps a trifle more rapidly in Louisiana than in the nation generally. (See Figure 23.) The direct action of rural life is reflected in the high homicide rates among Louisiana's white population. Among Negroes the very high rates still do not equal those for the nation. (See Figure 24.) There may have been a slight improvement between 1920 and 1940. Low suicide rates are the counterpart of high homicide rates. Suicide rates increased slightly between 1920 and 1940, but the rates in Louisiana hardly kept pace with those for the nation. (See Figure 25.)

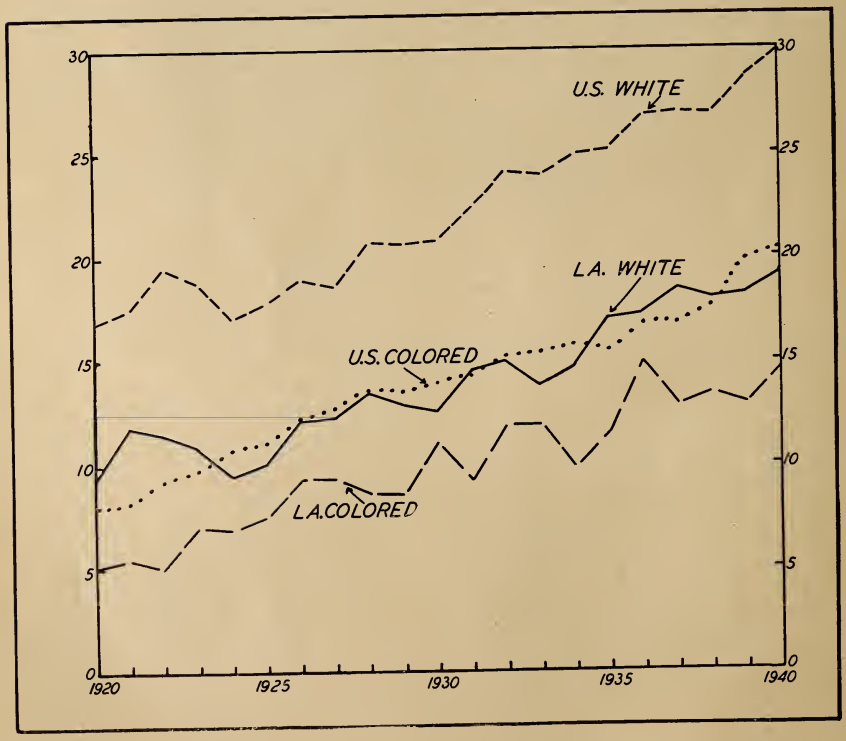

FIGURE 19. Annual Death Rates from Diabetes Mellitus, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

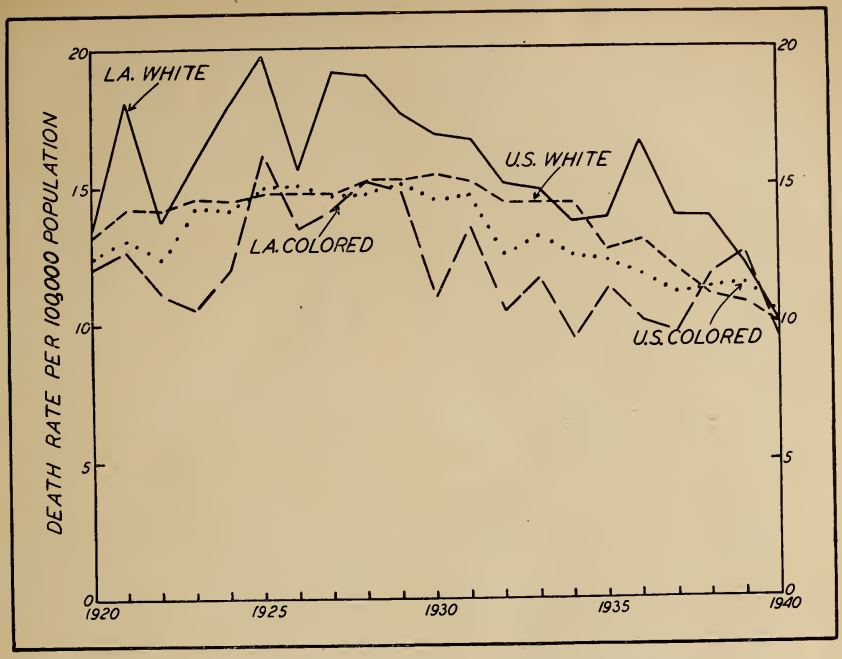

FIGURE 20. Annual Death Rates from Appendicitis, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

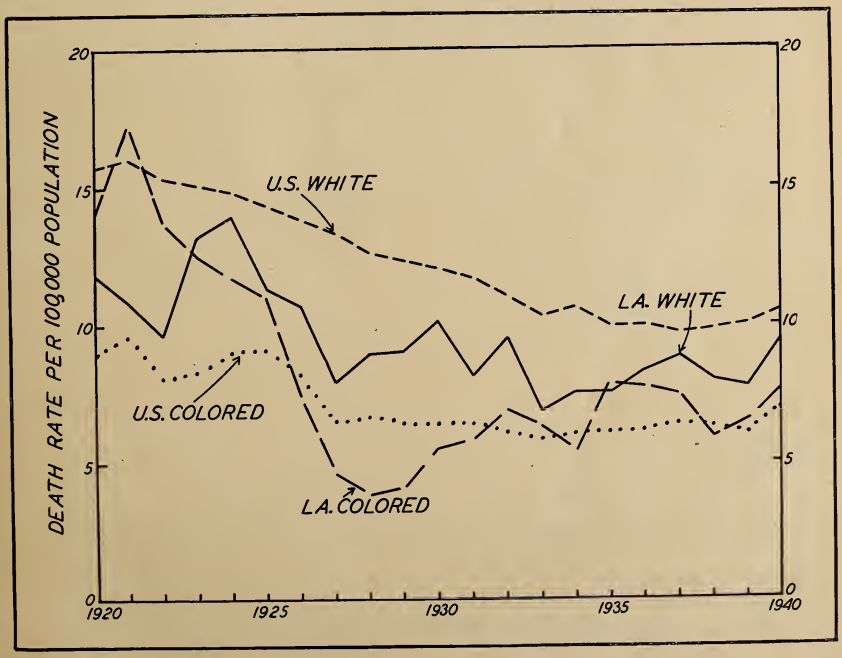

FIGURE 21. Annual Death Rates from Congential Malformations, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

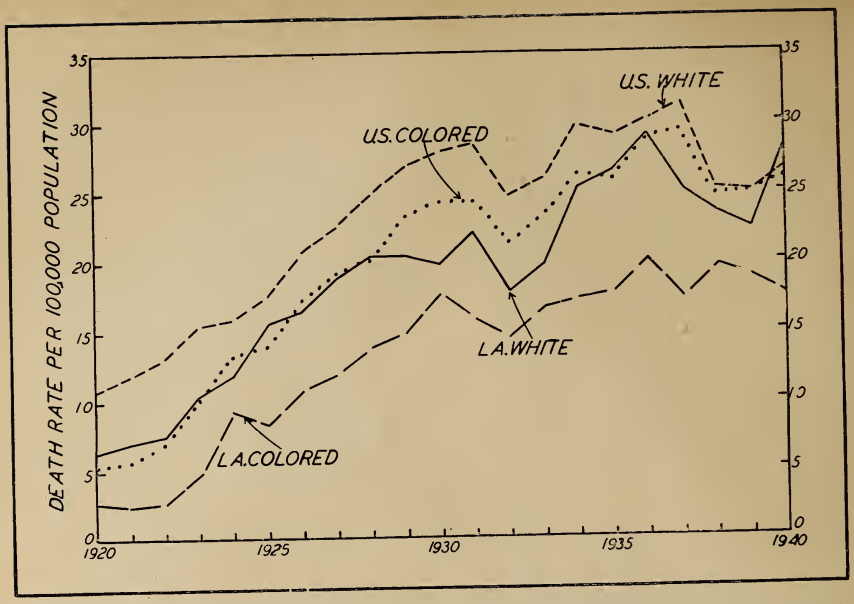

FIGURE 22. Annual Death Rates From Motor-vehicle Accidents, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

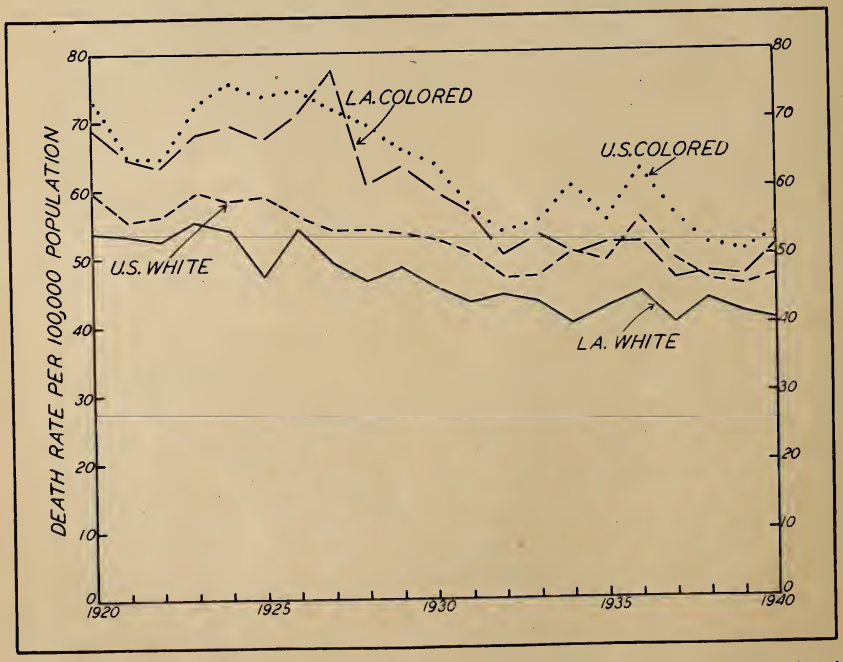

FIGURE 23. Annual Death Rates from Accidents Other than Motor-vehicle, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

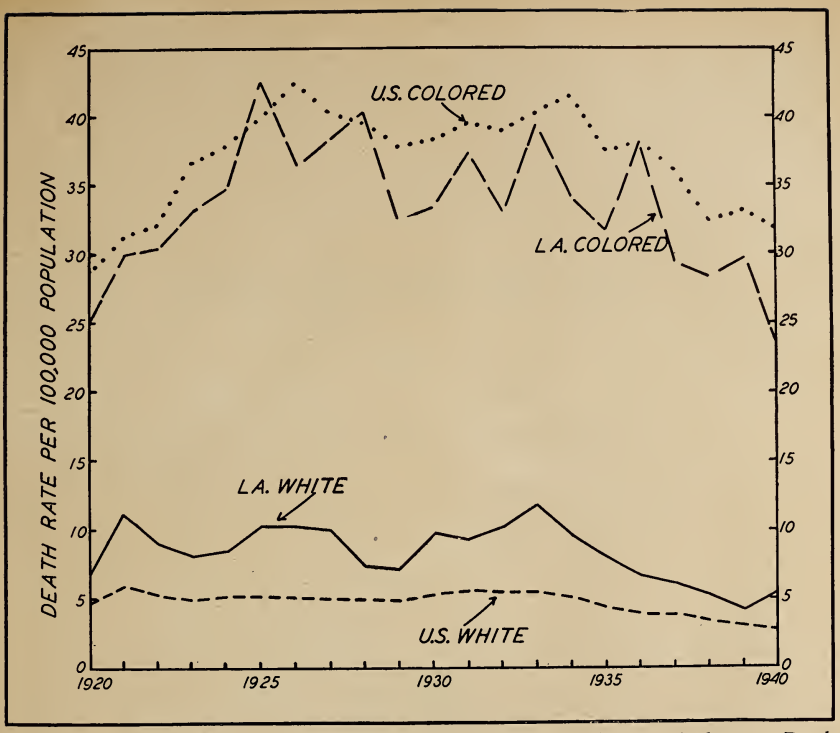

FIGURE 24. Annual Death Rates from Homicide, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.

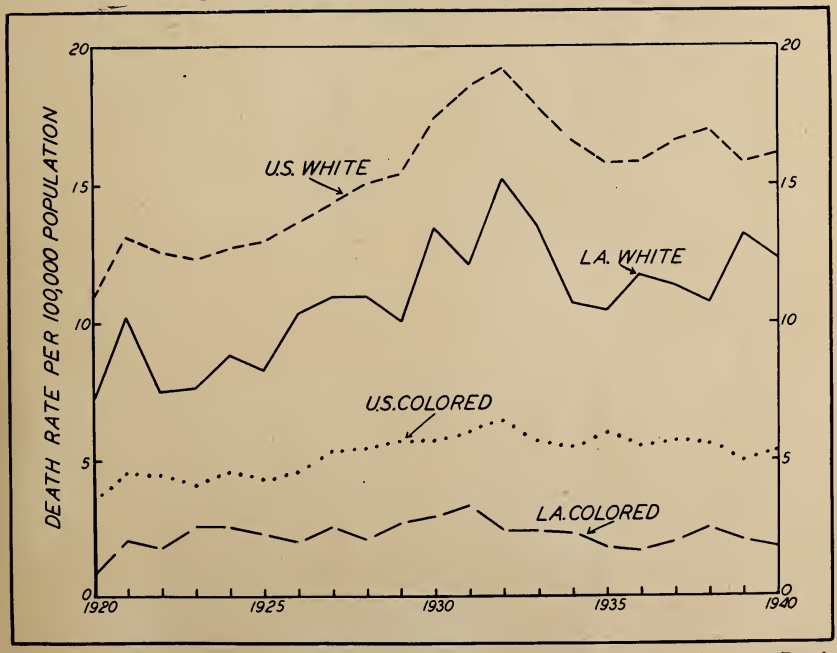

FIGURE 25. Annual Death Rates from Suicide, Louisiana and the United States Death Registration Area of 1920 for 1920 to 1940, by Race.